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CLERK

IN THE

Supreme Court of the United States

OCTOBER TERM, 1944

THE STATE OF NEBRASKA, COMPLAINANT,

vs.

THE STATE OF WYOMING, DEFENDANT.

and

THE STATE OF COLORADO, IMPLEADED DEFENDANT,
THE UNITED STATES OF AMERICA, INTERVENOR.

APPENDIX TO BRIEF OF THE STATE OF COLORADO, IMPLEADED DEFENDANT.

H. LAWRENCE HINKLEY,
Attorney-General of the State of Colorado.

JEAN S. BREITENSTEIN,
GEORGE J. BAILEY,
THOMAS J. WARREN,
GAIL L. IRELAND,
CLIFFORD H. STONE,
Special Counsel for the State of Colorado.

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IN THE

Supreme Court of the United States

OCTOBER TERM, 1944

No. 6 Original

THE STATE OF NEBRASKA, COMPLAINANT,

vs.

THE STATE OF WYOMING, DEFENDANT.

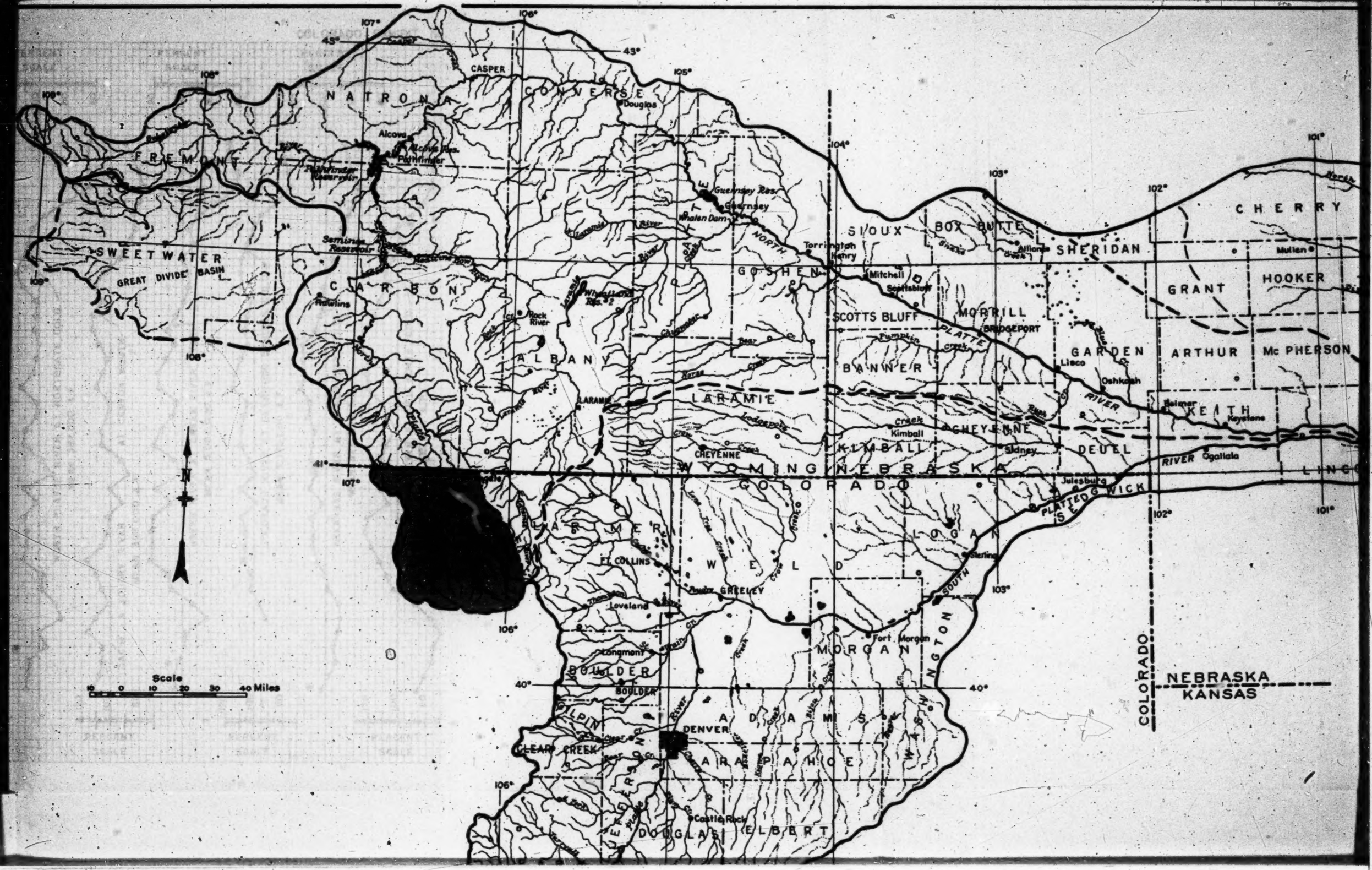
and

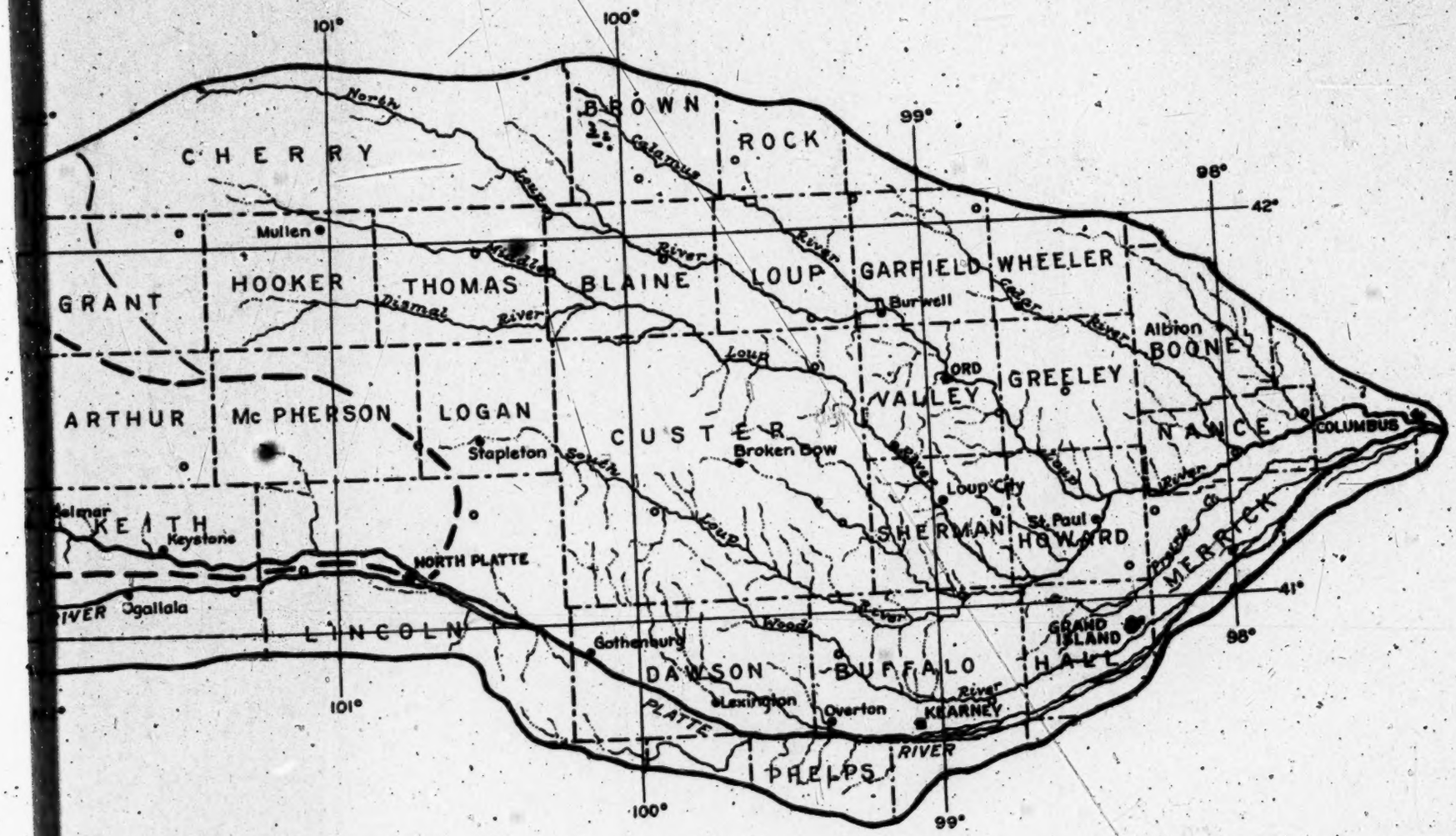
THE STATE OF COLORADO, IMPLEADED DEFENDANT,
THE UNITED STATES OF AMERICA, INTERVENOR.

APPENDIX TO BRIEF OF THE STATE OF COLORADO, IMPLEADED DEFENDANT.

STATEMENT.

In this Appendix Colorado has reproduced from the record certain maps and graphs. Short statements are quoted verbatim from other exhibits. Excerpts from the testimony of some of the witnesses are presented by exact copies from the record of such portions as are thought necessary to an understanding of each particular quotation. The purpose is to amplify rather than contradict specific fact findings made by the Master.


WYOMING
NEBRASKA
COLORADO
NATRONA
CONVERSE
NIOBRARA
WESTON
CROOK
CAMPBELL
CASPER
Douglas
Alcova
Pathfinder
Pathfinder Reservoir
FREMONT
Seminoe Reservoir
SWEETWATER
GREAT DIVIDE BASIN
CARBON
Rawlins
Rock River
Wheatland No. 2
Chugwater
Bear Creek
ALBANY
LARAMIE
Laramie River
Laramie
Lodgepole Creek
Kimball
CHEYENNE
Cheyenne
Guernsey Res.
Guernsey
Wheatland Res. No. 1
Whalen Dam
NORTH PLATTE RIVER
GOSHEN
Torrington
Henry
SIOUX
BOX BUTTE
Alliance
SHERIDAN
Mitchell
Scottsbluff
SCOTTS BLUFF
MORRILL
BRIDGEPORT
Pumpkin Creek
PLATTE RIVER
BANNER
GARDEN
Lisco
Oshkosh
GRANT
HOOKER
ARTHUR
Mc PHERSON
Keith
Keystone
Kimball
CHEYENNE
Sidney
DEUEL
Ogallala
Julesburg
SEDGWICK
PLATTE
LOGAN
Sterling
WELD
Fort Collins
Greeley
Loveland
Thompson
Big Thompson
South Platte River
MORGAN
Fort Morgan
WASHINGTON
BOULDER
Longmont
Boulder
GILPIN
CLEAR CREEK
DENVER
ADAMS
ARAPAHOE
Castle Rock
DOUGLAS
ELBERT
CHERRY
Merritt Reservoir
Scale
10 0 10 20 30 40 Miles
N
107°
106°
105°
104°
103°
102°
101°
43°
41°
40°
109°
108°



GENERAL INDEX MAP

PLATTE RIVER BASIN

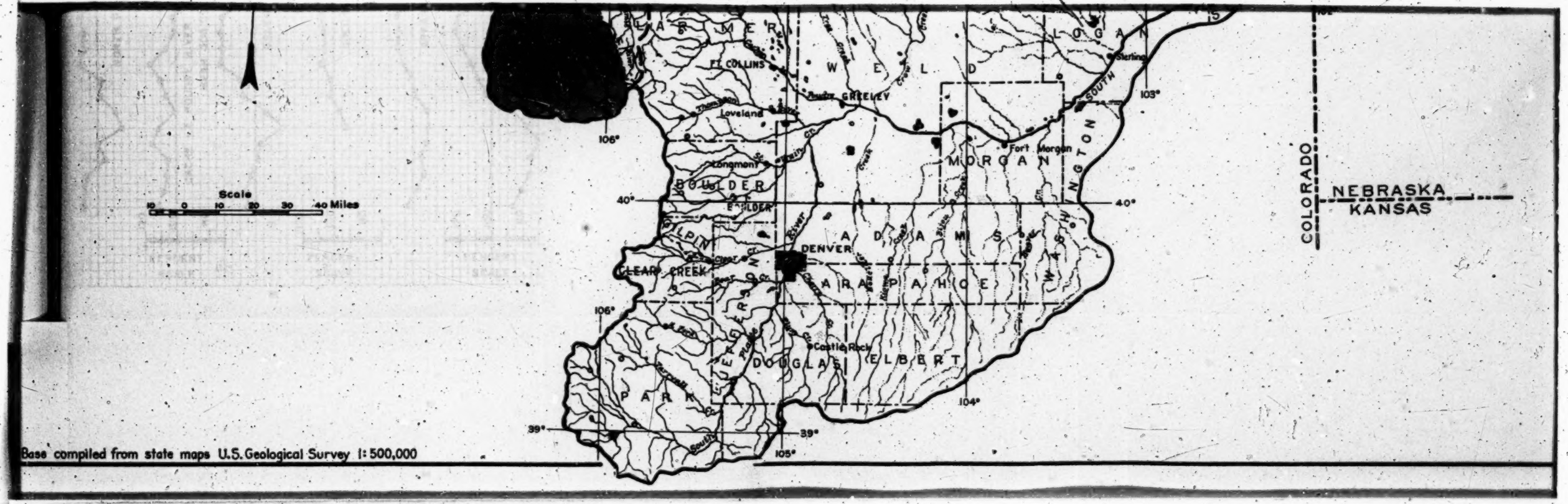
PREPARED BY

COLORADO WATER CONSERVATION BOARD

ENGINEERING DEPARTMENT

C. L. Patterson, Chief Engineer

October 1938


Scale
10 0 10 20 30 40 Miles
LARIMER
WELD
LOGAN
Ft. COLLINS
GREELEY
Sterling
Loveland
Longmont
BOULDER
Fort Morgan
MORGAN
GILPIN
DENVER
ADAMS
CLEAR CREEK
ARAPAHOE
PARK
DOUGLAS
ELBERT
Castle Rock
106°
104°
103°
40°
39°
105°
COLORADO
NEBRASKA
KANSAS
Base compiled from state maps U.S. Geological Survey 1:500,000



GENERAL INDEX MAP

PLATTE RIVER BASIN

PREPARED BY

COLORADO WATER CONSERVATION BOARD

ENGINEERING DEPARTMENT

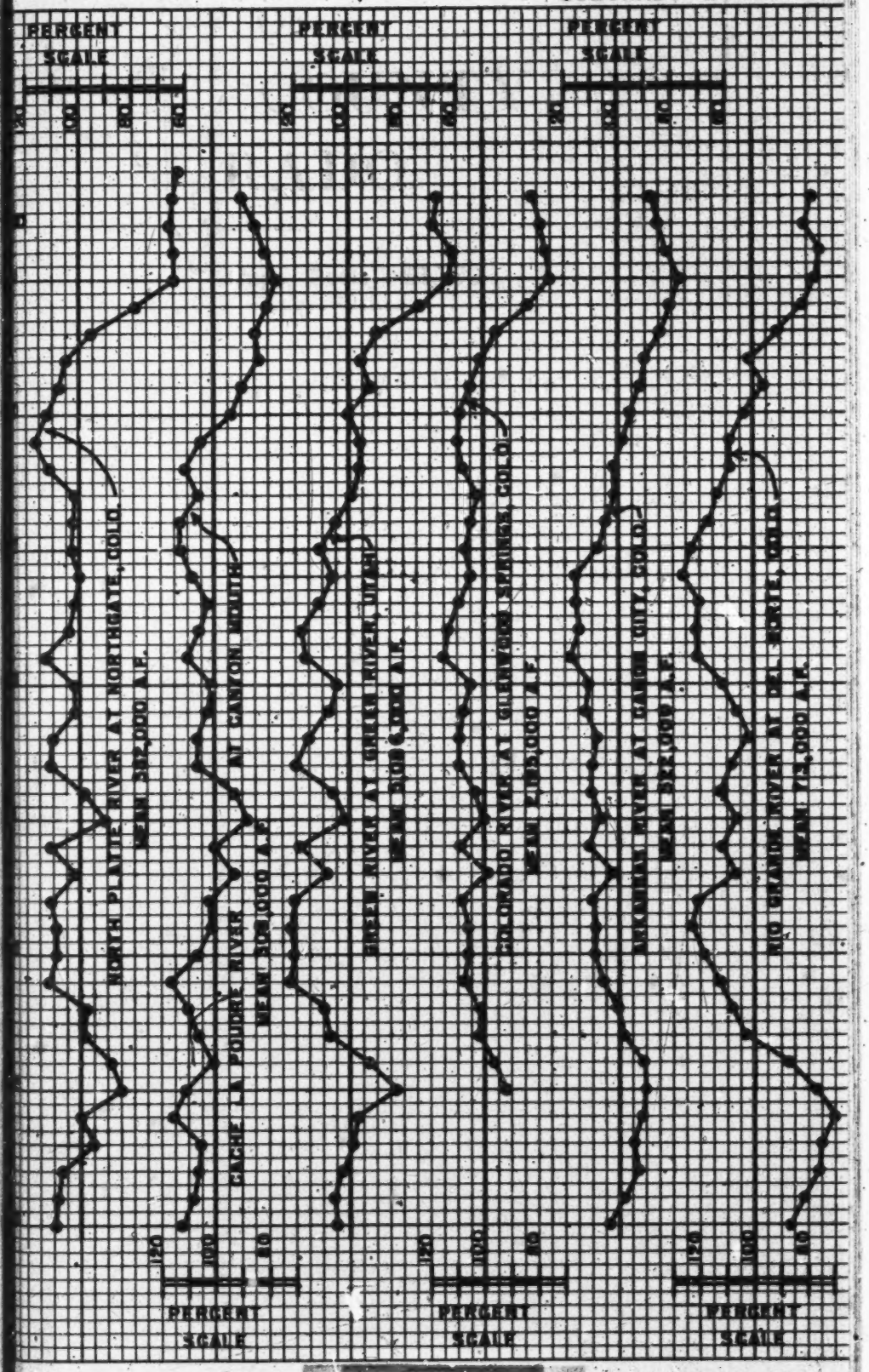
C. L. Patterson, Chief Engineer

October 1938

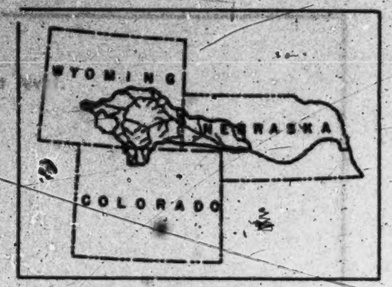
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COLORADO EXHIBIT No.



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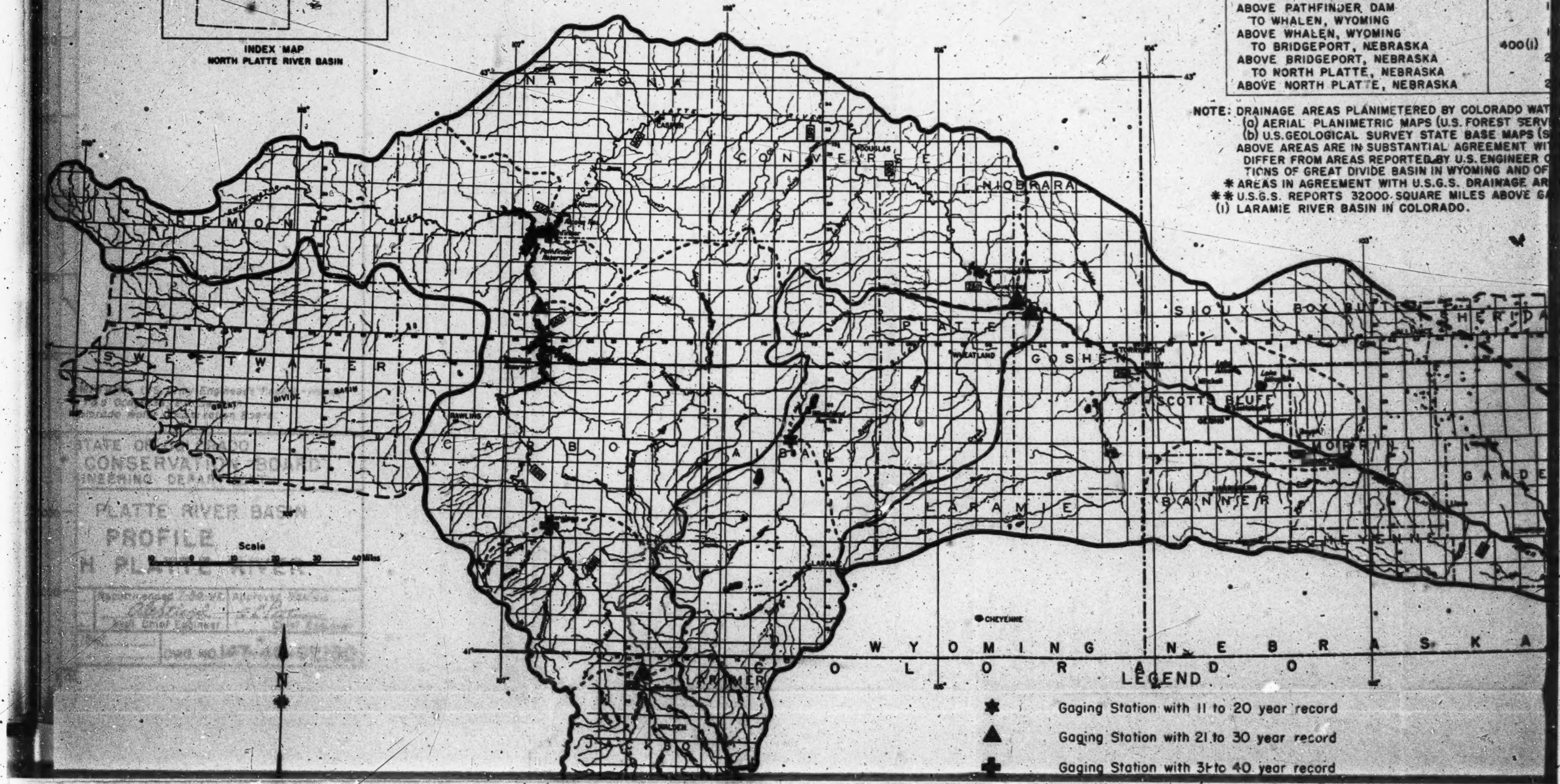
INDEX MAP
NORTH PLATTE RIVER BASIN

NORTH PLATTE RIVER

VALUES IN SQUARE MILES

DESCRIPTION	COLORAD
ABOVE NORTHGATE, COLORADO TO SARATOGA, WYOMING	190
ABOVE SARATOGA, WYOMING TO ABOVE PATHFINDER RESERVOIR	-
ABOVE PATHFINDER RESERVOIR TO PATHFINDER DAM	-
ABOVE PATHFINDER DAM TO WHALEN, WYOMING	-
ABOVE WHALEN, WYOMING TO BRIDGEPORT, NEBRASKA	400(i)
ABOVE BRIDGEPORT, NEBRASKA TO NORTH PLATTE, NEBRASKA	-
ABOVE NORTH PLATTE, NEBRASKA	

NOTE: DRAINAGE AREAS PLANIMETERED BY COLORADO WAT
(a) AERIAL PLANIMETRIC MAPS (U.S. FOREST SERV
(b) U.S.GEOLOGICAL SURVEY STATE BASE MAPS (S
ABOVE AREAS ARE IN SUBSTANTIAL AGREEMENT WI
DIFFER FROM AREAS REPORTED BY U.S. ENGINEER O
TIONS OF GREAT DIVIDE BASIN IN WYOMING AND OF
* AREAS IN AGREEMENT WITH U.S.G.S. DRAINAGE AR
** U.S.G.S. REPORTS 32000 SQUARE MILES ABOVE GA
(i) LARAMIE RIVER BASIN IN COLORADO.



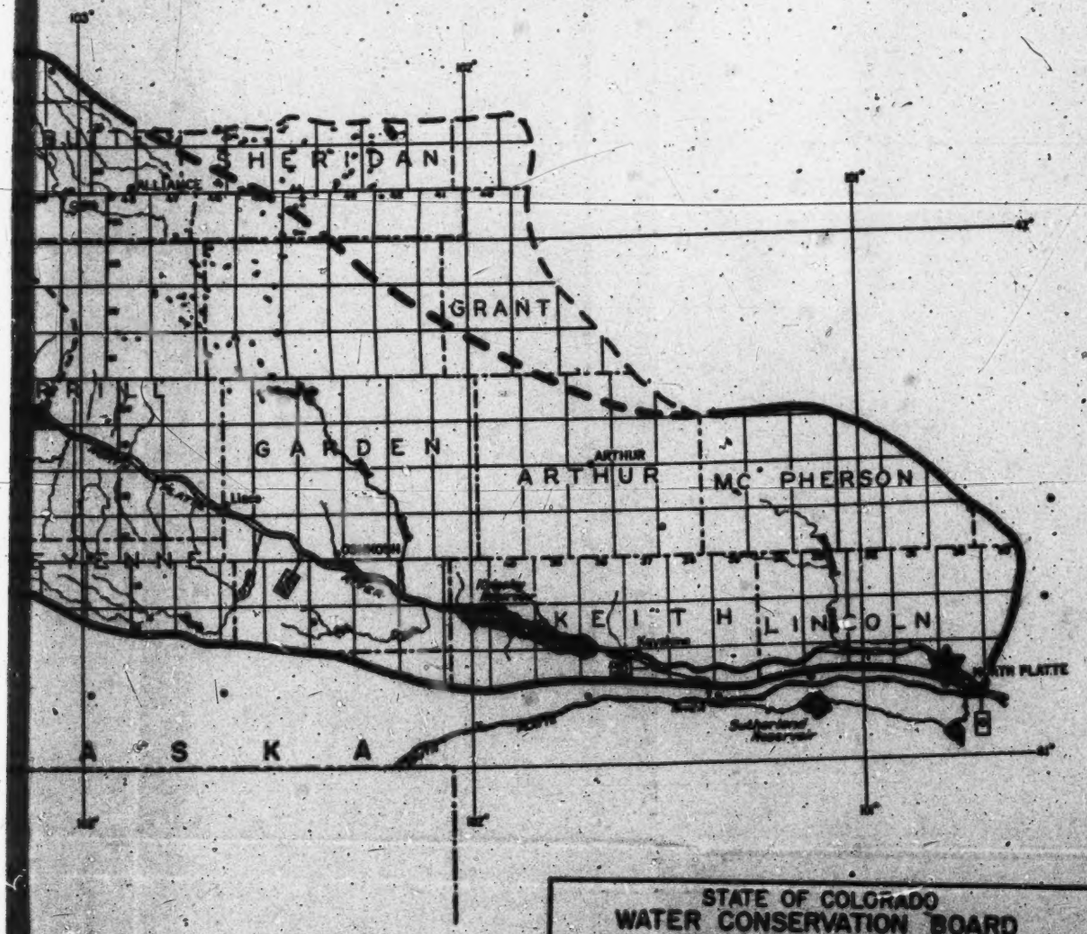
PLATTE RIVER BASIN
PROFILE
H PLATTE RIVER

NORTH PLATTE RIVER BASIN DRAINAGE AREAS

MILES

RIPTION	COLORADO (a)	WYOMING (b)	NEBRASKA (b)	TOTALS
E, COLORADO	1440	-	-	1440 *
, WYOMING	190	1250	-	1440
A, WYOMING	1630	1250	-	2880 *
HFINDER RESERVOIR	-	4530	-	4530
ER RESERVOIR	1630	5780	-	7410 *
R. DAM	-	3290	-	3290
DER DAM	1630	9070	-	10700 *
YOMING	-	5600	-	5600
WYOMING	1630	14670	-	16300 *
RT, NEBRASKA	400(1)	7070	1530	9000
ORT, NEBRASKA	2030	21740	1530	25300 *
ATTE, NEBRASKA	-	-	7200	7200
LATTE, NEBRASKA	2030	21740	8730	32500 **

PLANIMETERED BY COLORADO WATER CONSERVATION BOARD-ENGINEERING DEPT., FROM
NIMETRIC MAPS (U.S. FOREST SERVICE) FOR AREAS IN COLORADO; AND
CAL SURVEY STATE BASE MAPS (SCALE 1:500,000) FOR AREAS IN WYOMING AND NEBRASKA.
E IN SUBSTANTIAL AGREEMENT WITH REPORTS OF U.S.G.S. (HYDROGRAPHIC DIVISION), BUT
EAS REPORTED BY U.S. ENGINEER CORPS (H.D. 197-73 D. CONG. 2 D. SESSION) WHICH INCLUDE POR-
DIVIDE BASIN IN WYOMING AND OF SAND HILL-LAKE AREA NORTH OF RIVER IN NEBRASKA.
MENT WITH U.S.G.S. DRAINAGE AREA ABOVE GAGING STATION.
32000 SQUARE MILES ABOVE GAGING STATION.
BASIN IN COLORADO.



STATE OF COLORADO
WATER CONSERVATION BOARD
ENGINEERING DEPARTMENT

MIDDLE FORK MICHIGAN RIVER

MICHIGAN RIVER

STATE LINE - COLORADO WYOMING

SEMINOE RESERVOIR

PATHFINDER RESERVOIR

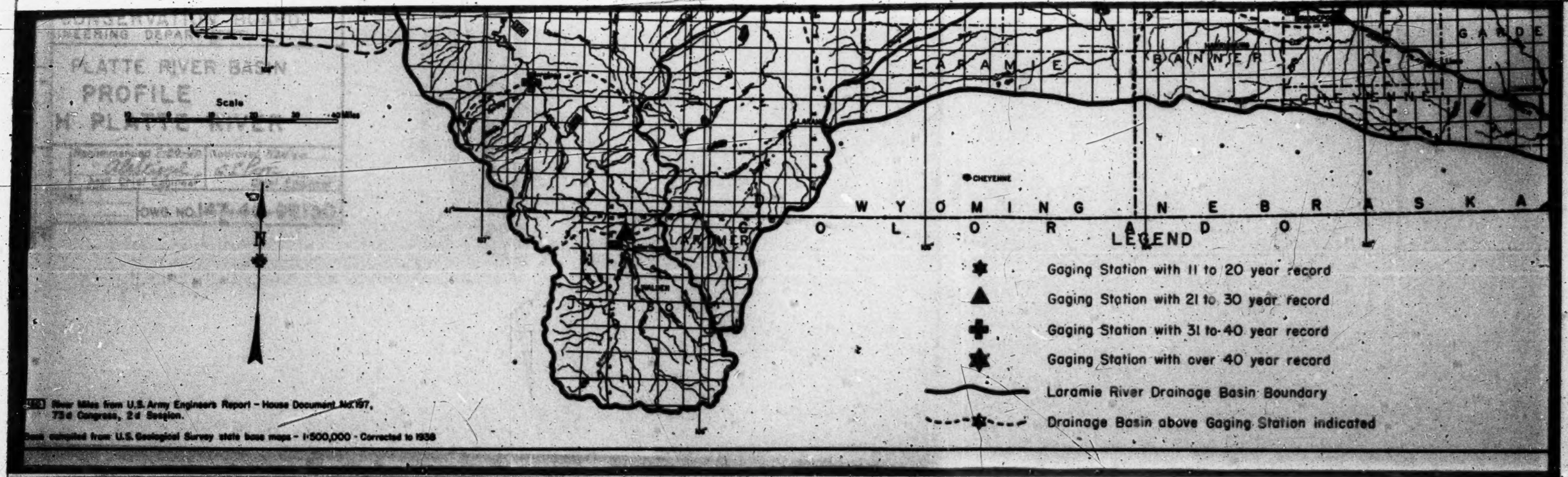
ALCOVA RESERVOIR

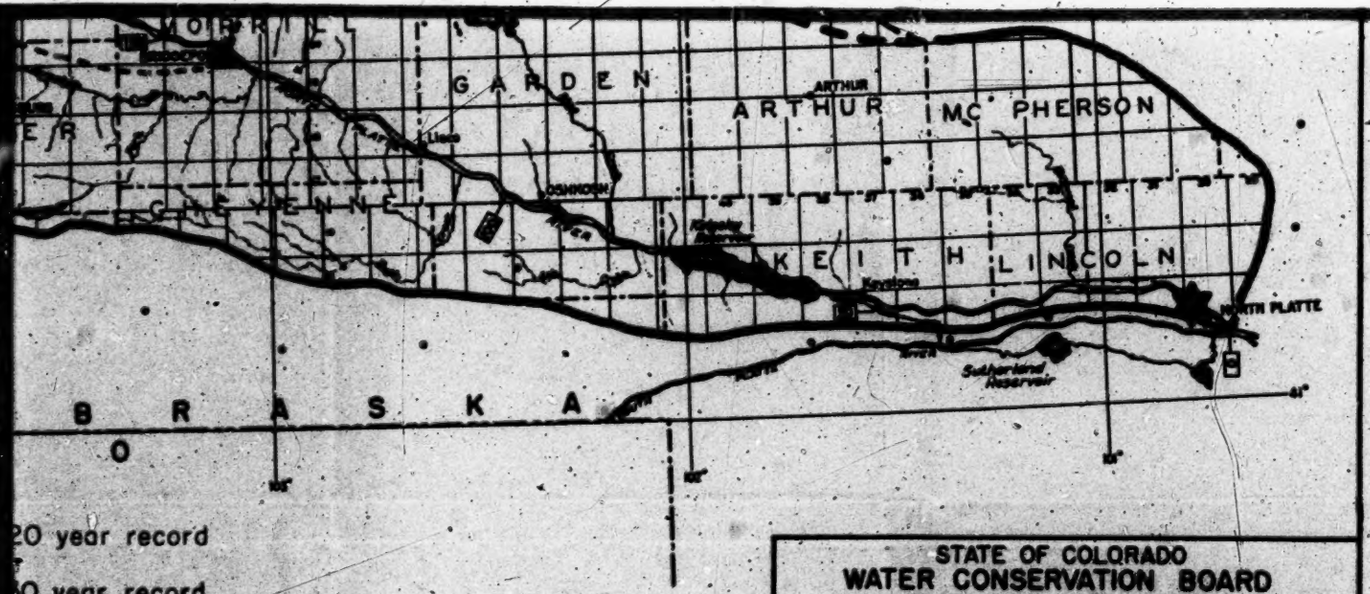
NORTH

CASPER

DOUGLAS

MILES ABOVE MOUTH OF NORTH PLATTE RIVER


PLATTE RIVER BASIN
PROFILE
Scale
LARAMIE
BANNER
CHEYENNE
WYOMING
NEBRASKA
COLORADO
FARMER
LEGEND
Gaging Station with 11 to 20 year record
Gaging Station with 21 to 30 year record
Gaging Station with 31 to 40 year record
Gaging Station with over 40 year record
Laramie River Drainage Basin Boundary
Drainage Basin above Gaging Station indicated
River Miles from U.S. Army Engineers Report - House Document No.197, 73d Congress, 2d Session.
Base compiled from U.S. Geological Survey state base maps - 1:500,000 - Corrected to 1938



20 year record

50 year record

40 year record

90 year record

asin Boundary

ing Station indicated

STATE OF COLORADO
WATER CONSERVATION BOARD
ENGINEERING DEPARTMENT

NORTH PLATTE RIVER BASIN

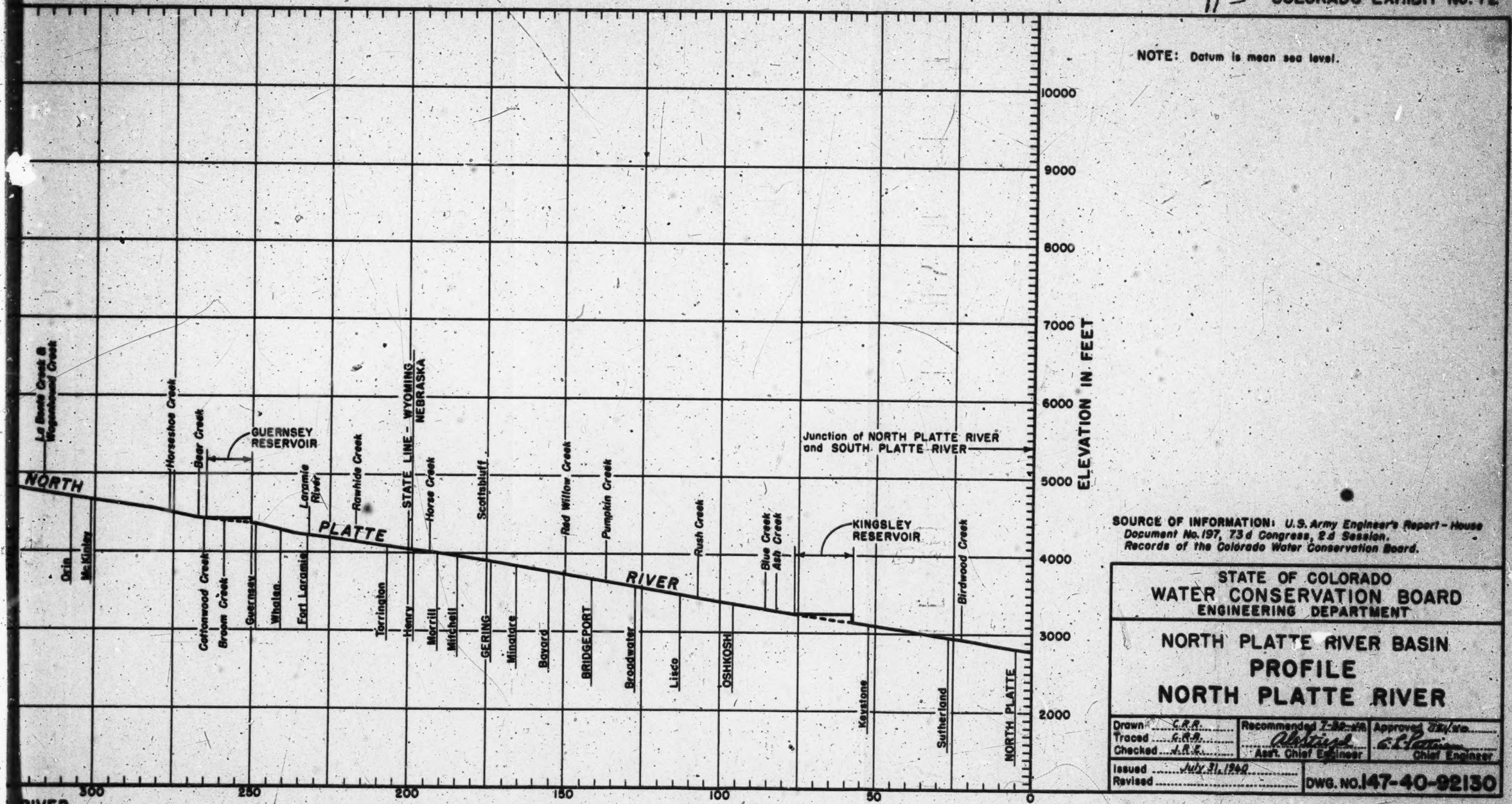
PRINCIPAL GAGING STATIONS AND DRAINAGE BASIN AREAS

Drawn R.P.N.
Traced C.R.K.
Checked J.R.E.

Issued July 23 1940
Revised

Dwg. No 47-40-92126

11 — COLORADO EXHIBIT No. 72



SOURCE OF INFORMATION: *U.S. Army Engineer's Report - House Document No. 197, 73d Congress, 2d Session. Records of the Colorado Water Conservation Board.*

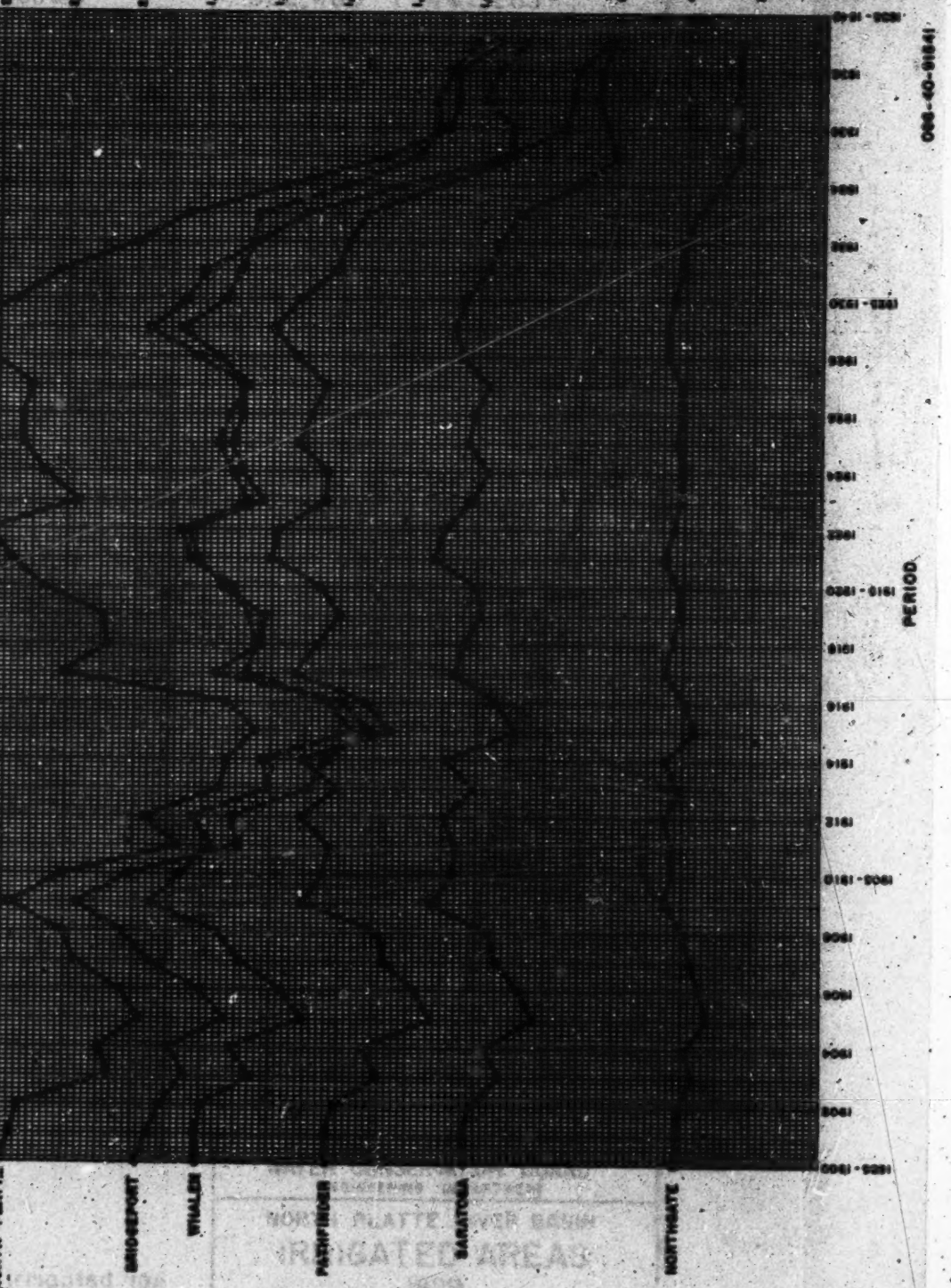
STATE OF COLORADO
WATER CONSERVATION BOARD
ENGINEERING DEPARTMENT

NORTH PLATTE RIVER BASIN
PROFILE
NORTH PLATTE RIVER

Drawn C.R.R.	Recommended 7-30-40	Approved 7/31/40
Traced C.R.R.	Asst. Chief Engineer	Chief Engineer
Checked J.R.E.		
Issued July 31, 1940	DWG. NO. 147-40-92130	
Revised		

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COLORADO EXHIBIT No. 104



Tightly Bound

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COLORADO EXHIBIT No. 116

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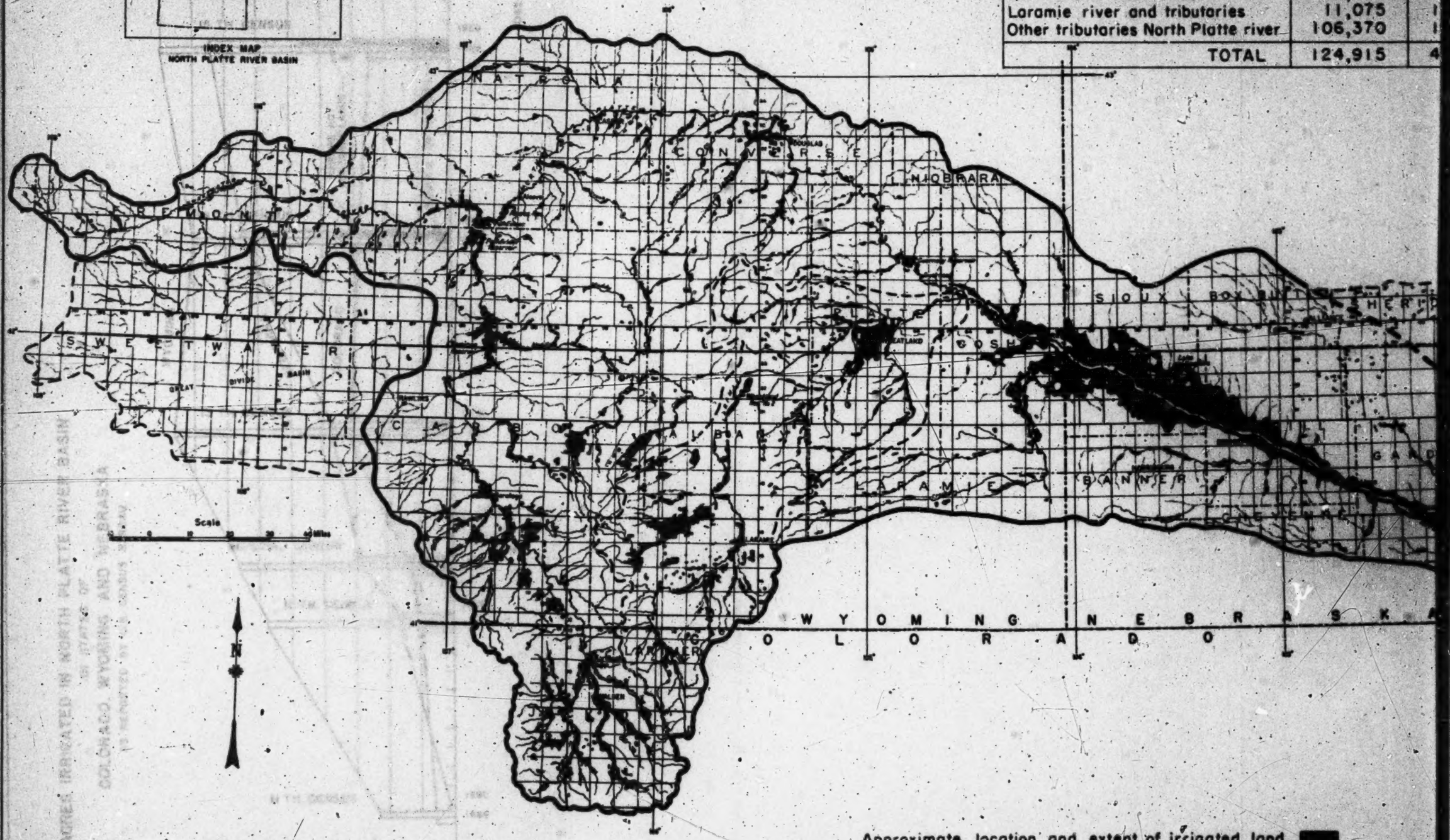
EXTENT OF IRRIGATED AREAS AS RE

Values in acres

DRAINAGE BASIN	COLORADO	W
North Platte river direct	7,470	
Laramie river and tributaries	11,075	1
Other tributaries North Platte river	106,370	1
TOTAL	124,915	4



INDEX MAP
NORTH PLATTE RIVER BASIN



Approximate location and extent of irrigated land

Base compiled from U.S. Geological Survey state base maps - 1:500,000 - Corrected to 1938

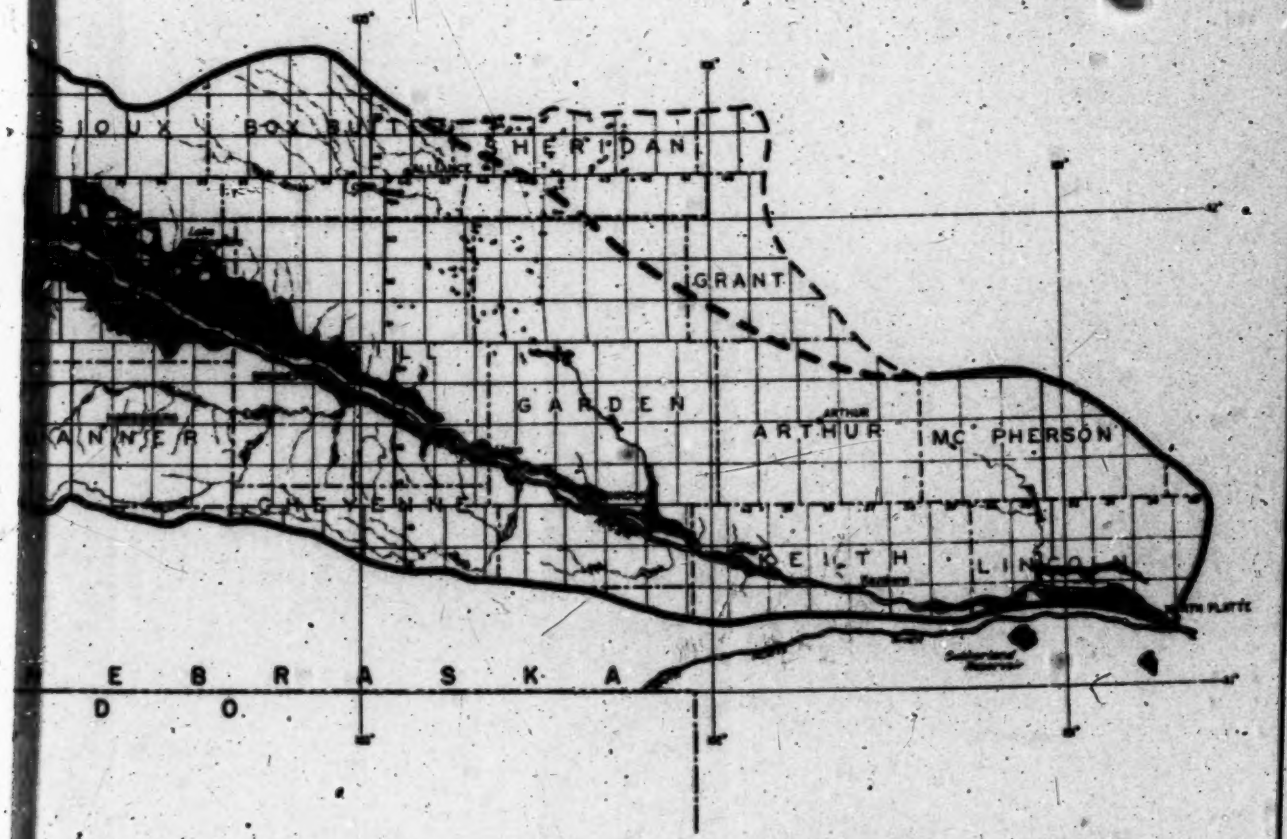
ACRES IRRIGATED IN NORTH PLATTE RIVER BASIN IN STATE OF COLORADO, WYOMING AND NEBRASKA

15 — COLORADO EXHIBIT No. 115

ENT OF IRRIGATED AREAS AS REPORTED BY U.S. CENSUS 1930

Acres

INAGE BASIN	COLORADO	WYOMING	NEBRASKA	TOTAL
river direct	7,470	81,313	352,480	441,263
ver and tributaries	11,075	179,019	-	190,094
dries North Platte river	106,370	192,420	21,212	320,002
TOTAL	124,915	452,752	373,692	951,359



STATE OF COLORADO
WATER CONSERVATION BOARD
ENGINEERING DEPARTMENT

NORTH PLATTE RIVER BASIN
IRRIGATED AREAS
1929

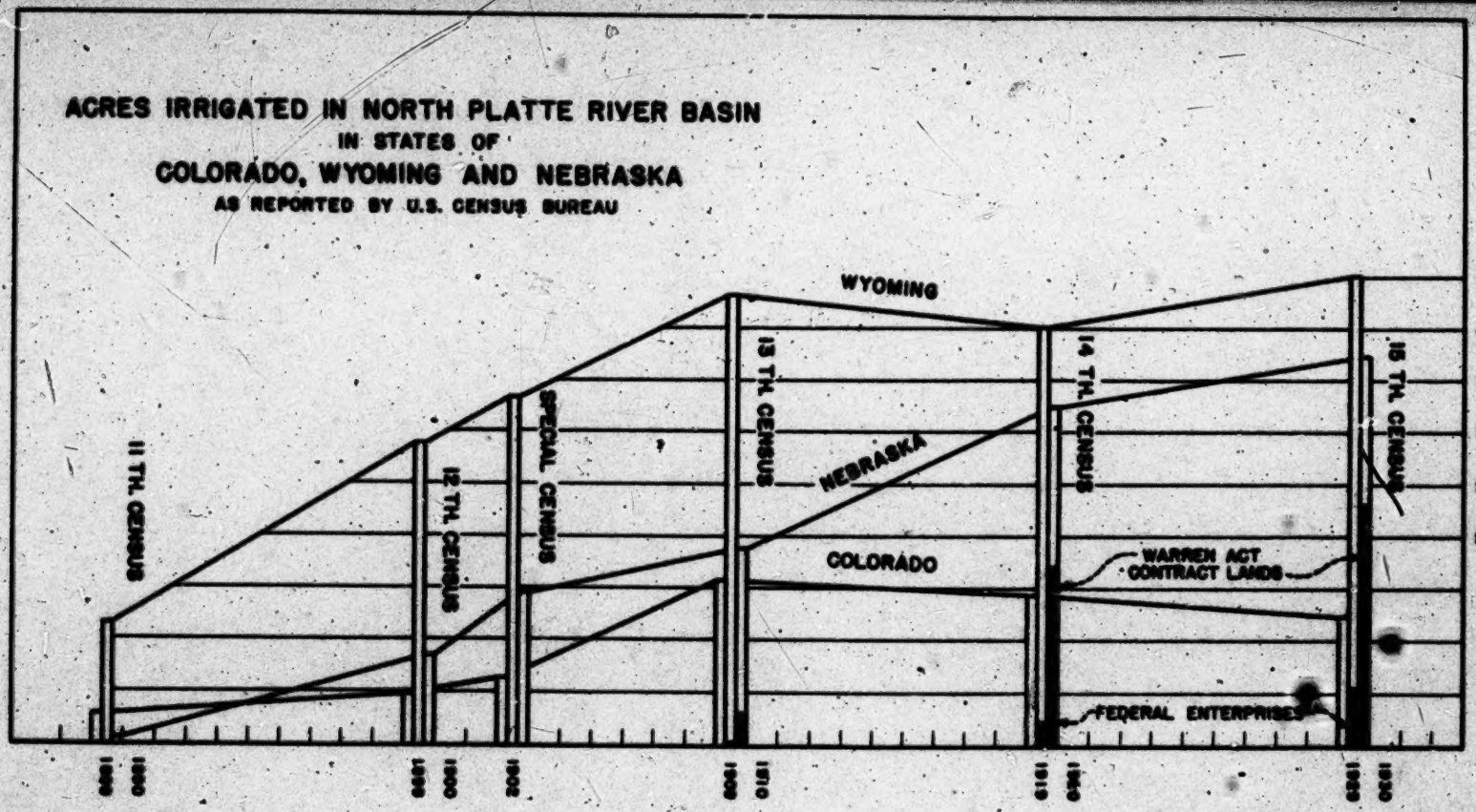
Drawn C.A.C.
Traced C.A.W.
Checked E.H.D.

Issued DEC. 1939
Revised

DWG. NO. 147-38-3298

extent of irrigated land

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COLORADO EXHIBIT No. 116

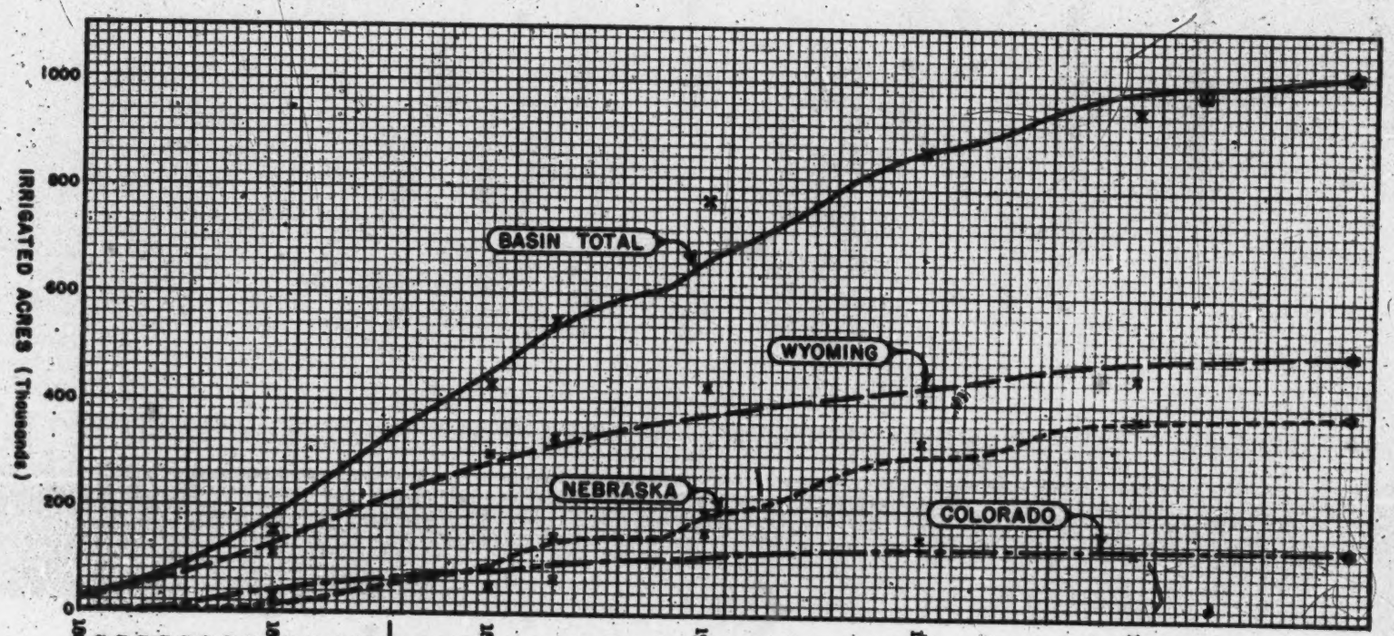
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COLORADO WATER CONSERVATION BOARD – Engineering Department

IRRIGATED ACREAGE
NORTH PLATTE RIVER BASIN
COLORADO – WYOMING – NEBRASKA

× Reports of the U.S. Census Bureau
⊞ Report of U.S. Army Engineers, H.D. No. 197 – 73 d Congress, 2 d Session
✱ Determined by Colorado Water Conservation Board

Colorado – Includes Jackson County and Laramie River Basin
Wyoming – Includes Main River, Laramie River and other tributaries, – private and U.S.B.R. project lands
Nebraska – Includes Main River and tributaries, – private and U.S.B.R. project lands



YEAR	TOTALS	WYOMING	NEBRASKA	COLORADO
1939	1,026,050	506,540	383,355	136,155
38	1,022,700	504,675	382,080	136,005
37	1,018,990	502,455	380,670	135,865
36	1,014,880	499,735	379,340	135,725
35	1,011,080	497,505	377,690	135,585
34	1,006,990	494,895	376,650	135,445
33	1,002,800	492,175	375,320	135,305
32	998,460	489,355	373,970	135,165
31	994,940	487,295	372,650	135,025
30	991,690	485,505	371,300	134,885
1929	987,560	482,875	369,840	134,745
28	983,090	479,875	368,610	134,605
27	977,610	475,875	367,270	134,465
26	969,320	471,775	362,280	134,325
25	955,940	467,575	354,180	134,185
24	934,540	459,375	338,120	134,045
23	912,890	456,875	322,070	133,905
22	899,170	449,575	316,090	133,765
21	885,970	442,575	309,970	133,625
20	876,790	436,375	306,930	133,485
1919	867,100	430,575	303,380	133,345
18	856,960	425,575	298,340	133,345
17	839,275	419,120	288,810	131,345
16	821,015	414,500	276,670	129,845
15	799,385	409,500	263,680	126,205
14	773,775	404,590	248,800	120,385
13	748,695	399,000	239,850	109,845
12	725,970	395,000	210,625	120,345
11	706,390	384,500	199,590	122,300
10	690,390	380,500	198,150	111,740
1909	669,735	373,500	181,095	115,180
08	642,890	366,750	168,990	112,600
07	616,490	359,000	147,450	109,980
06	604,335	353,500	145,510	106,905
05	591,685	343,500	144,370	103,815
04	578,095	334,500	144,860	100,735
03	568,400	325,000	139,800	97,600
02	563,860	315,500	133,770	99,590
01	515,365	304,500	120,730	90,135
1900	495,995	295,600	105,690	86,705
1899	456,845	282,500	90,660	83,685
98	448,380	270,250	78,680	79,510
97	409,105	256,500	70,710	79,895
96	377,610	242,500	68,730	76,380
95	353,570	228,000	54,980	69,710
94	328,580	212,000	46,980	64,580
93	284,595	195,500	39,060	60,095
92	269,685	178,750	31,150	59,885
91	256,155	163,750	23,210	51,195
90	205,280	145,000	15,500	46,280
1889	178,805	128,750	7,375	42,680
88	157,405	115,250	6,150	36,005
87	133,075	99,250	4,950	28,575
86	118,010	86,500	5,750	21,760
85	90,665	74,500	2,550	15,615
84	71,340	63,000	1,350	7,190
83	56,945	52,000	300	4,645
82	44,600	42,250	150	2,200
81	34,695	33,750	-	955
80	26,695	26,000	-	695

COLORADO EXHIBIT No. 117

082-41-92248

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COLORADO EXHIBIT NO. 56, PAGE 5.

JACKSON COUNTY INVESTIGATIONS

Summary of Production, Use and Disposal of Water
North Platte River and Tributaries
Jackson County, Colorado

Mean Annual Production	Values in Acre-Feet Items	Totals	Percents
Total in Jackson County.....		635,100	100.0%
Chargeable to Colorado:			
Exportations at current rates	6,000		0.9%
Irrigation Depletions by Present Irrigation in County	98,580		15.5%
Sum—Chargeable to Colorado.		104,580	16.4%
Balance		530,520	83.6%
Conveyance to Wyoming Line..	24,930		3.9%
Available for Downstream Use.		505,590	79.7%

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UNITED STATES EXHIBIT 112-C.

Report of the Board of Review

on

North Platte Cooperative Investigations

Made to

The Secretary of the Interior

and

The Governor of Wyoming

(Sept. 4, 1920)

P. 8, Conclusions, Para. 19:

"(a) The North Platte River affords a sufficient water supply for the irrigation of the arable lands in Colorado and Wyoming that are likely to be developed and extensive additional areas in Nebraska provided the available reservoir sites are utilized for storage and all the water available is used to good economic advantage.

"(b) Further irrigation development in Colorado and Wyoming need not be restricted."

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UNITED STATES EXHIBIT 204-B.

U. S. Department of Commerce
Jesse H. Jones, Secretary
Bureau of the Census
16th Census
of the United States
1940

Irrigation
of Agricultural
Lands
Colorado

The following from pages 36 to 37, County Table I—Irrigated Farms and Tenure of Farm Operators, Etc.

Item			Jackson Co.
18. Area Irrigated	1939	acres	154,279

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EXCERPTS FROM PROCEEDINGS AT TORRINGTON, WYOMING, ON MAY 20, 1939.

Transcript Pages 15846-15848

MR. HOWELL: I was just saying that the Court will recall that at the opening session of this hearing the State of Wyoming presented a motion to dismiss the cause of action of the complainant, the State of Nebraska, and we announced at that time that we would file a motion, and leave was granted to prepare that motion, and, pursuant to that authorization, I would like to make that motion at this time in behalf of the impleaded defendant, the State of Colorado.

Comes now the State of Colorado, impleaded defendant, at the conclusion of the presentation of the evidence by the complainant, the State of Nebraska, and said complainant having rested its case, and the defendant, the State of Wyoming, having moved that complainant's bill of complaint herein, and its alleged cause of action, be dismissed, and the said impleaded defendant, the State of Colorado, now moves that the Master find and recommend to the Court, that complainant's bill of complaint, and its alleged cause of action, and this entire case and proceeding, be dismissed, and that judgment be rendered in favor of this impleaded defendant, and that said State of Colorado be awarded its costs in this behalf, upon the grounds and for the reasons as follows, to-wit:

1. That the pleading of complainant herein fails to charge this impleaded defendant with the commission or omission of any act or duty resulting in injury to the legal rights of said State of Nebraska; and that no substantial evidence has been introduced in this cause upon the part of complainant sufficient to support or sustain any judgment, order or decree in favor of the said complainant and against this impleaded defendant, the State of Colorado;

2. That there is no allegation in the amended and supplemental answer of the State of Wyoming, or elsewhere in the pleadings of said State charging any substantial

injury to the said State of Wyoming or its citizens caused or committed by the State of Colorado or its citizens;

3. That the principal purpose, as alleged in the pleadings, in impleading the State of Colorado in this case was to secure adjudication of the equitable apportionment of the benefits of the North Platte River to which the States of Colorado, Wyoming and Nebraska, respectively, are entitled; that if any of the said states is to be dismissed as a party herein without dismissing the entire proceedings, then the purpose for which this defendant was impleaded, will be destroyed and defeated;

4. That as to any issue formed by the petition of intervention of the United States of America, intervenor, and the pleading of any of the litigant states, it must follow that upon the dismissal of the bill of complaint of the State of Nebraska, the petition of said intervenor likewise must fail for want of necessary parties;

5. That if it shall appear to the Master and the Court, that the bill of complaint of the State of Nebraska against the defendant, the State of Wyoming, should be dismissed, it necessarily follows that the several alleged causes of action of the respective parties against this impleaded defendant, and the entire proceeding, must likewise be dismissed;

6. That the State of Colorado, impleaded defendant, reserves the right, if this motion be denied, to present all matters and issues pleaded in her behalf to the same extent and to the same effect as if this motion had not been presented.

I assume, Your Honor, that this motion will appear in the record immediately following Your Honor's ruling on the Wyoming motion.

THE MASTER: It will be given the same force and effect as though it were presented at that time. However, the record has already been transcribed, so it is not practicable to put it in that place.

EXCERPTS FROM PROCEEDINGS AT DENVER, COLORADO, ON DECEMBER 19, 1941.

Transcript Pages 29471-29474

MR. BREITENSTEIN: The second motion I have is one to dismiss.

Comes now the State of Colorado, impleaded defendant, and moves that the Master find that no substantial injury has been sustained by or is threatened to any of the parties hereto, and that the Master recommend to the Court that this entire case and proceeding be dismissed, and that the State (29472) of Colorado have judgment for its costs in this behalf expended.

As grounds for such motion the State of Colorado, impleaded defendant, says:

1. No substantial evidence has been introduced in this cause sufficient to sustain any judgment or decree against the impleaded defendant, the State of Colorado.

2. Upon the law and the evidence no party hereto has shown any right to relief against any of the other parties.

3. Neither the bill of complaint of the State of Nebraska, the amended and supplemental answer of the State of Wyoming, nor the petition in intervention of the United States, nor any other pleading in this cause, charges that the State of Colorado, or any of its citizens, have committed, caused to be committed or threaten to commit any substantial injury to the United States, the State of Nebraska, the State of Wyoming, or any of them.

4. No substantial evidence has been introduced in this cause sufficient to sustain a finding that the State of Wyoming, or its citizens, have ever withheld, are now withholding or threaten to withhold from the State of Nebraska all or any portion of the equitable share of the benefits of the water of the North Platte River or its tributaries to which the State of Nebraska and its citizens are entitled.

5. No substantial evidence has been introduced in this

cause sufficient to sustain a finding that the State of Colorado, or its citizens, have ever withheld, are now withholding or threaten to withhold all or any portion of the equitable share of the benefits of the water of the North Platte River or its tributaries to which either the State of Nebraska and its citizens or the State of Wyoming and its citizens are entitled.

6. No substantial evidence has been introduced in this cause which would justify or require the apportionment among the several states of the benefits of the flow of the North Platte River. To justify such an apportionment there must be a showing not only of substantial injury by one state to another state but also that the benefits of the stream as afforded naturally and put to use by the several states are so inequal as would require one state as a matter of equity to forego benefits in order that another state may receive its equitable share of the benefits of the stream.

7. The evidence affirmatively shows that since the filing of the bill of complaint herein numerous dams have been constructed to impound the waters of the North Platte River in quantities greatly in excess of the amount that could have been impounded theretofore. Evidence of the operation of such dams, the amount of water that will be impounded thereby, and the release of water therefrom for irrigation purposes is entirely speculative and conjectural in character and furnishes no basis for the equitable apportionment between the litigant states of the benefits of the flow of the North Platte River.

8. There is no substantial evidence which establishes a reasonably fair and just basis for the equitable apportionment of the benefits of the water of the North Platte River.

9. The petition in intervention of the United States is predicated upon the theory that the intervention of the United States is necessary to protect rights of the United States from injury by any decree that might be entered

in this case. The dismissal of this entire case and proceeding will not injure any right of the United States.

The State of Colorado, impleaded defendant, reserves the right, if this motion is denied, to participate and be heard in all further proceedings in this cause.

Transcript Pages 29470-29471

MR. BREITENSTEIN: The first is a motion to require the United States to elect.

The State of Colorado, impleaded defendant, moves that an order be entered requiring the intervenor, the United States, to elect between its first cause of action and perhaps what we might call the second cause of action, as set out in its petition in intervention. As grounds for such motion the State of Colorado says:

1. The first cause of action asserted by the intervenor apparently proceeds upon the theory that the United States is the owner, proprietor and sovereign over the unappropriated waters of the North Platte River. The second cause of action seems to proceed upon the theory that the United States has acquired rights by compliance with the state laws of Wyoming and Nebraska by making appropriations thereunder.

2. These two theories are antagonistic and inconsistent since proof of one disproves the other.

3. Unless the United States makes an election between the two causes of action the issues of this case are unnecessarily and unduly confused to the prejudice of the litigant states.

I might say that motion was made before. It is merely made at this time for the sake of the record. I understand the Master indicated before that he had no power to rule on that motion.

EXCERPTS FROM TESTIMONY.

UNITED STATES WITNESS ANDREW WEISS

Transcript Pages 20447-20449

Direct Examination by Mr. Burke:

Q. When you first became acquainted with the North Platte River, in the period of 1888 to 1898, you were living on Colorado?

A. Yes.

Q. And that acquaintance was confined to the headwaters of the river?

A. Yes.

Q. I believe you testified that during that period you were engaged in practical irrigation on lands in North Park, Colorado?

A. I was.

Q. What were your observations, Mr. Weiss, as to the flow of the river, say, during the middle of July and August and September of any year?

A. Our flow would generally run down along about the close of June or perhaps the early part of July to a very moderate amount.

Q. What would be the condition of the flow, say, in the period prior to the middle of July?

A. Then we would have the run-off from the melting snows, and, according to the weather conditions, if we had good weather conditions, and also the freezing of the ground during the winter before the snow came, that would be very variable, but generally our snow run-off would be completed along about the middle of July or earlier.

Q. In general, Mr. Weiss, what were the dates of the priorities of the water-rights in that area?

A. The very large part of it was appropriated prior to 1890. I think the records will show that.

Q. Did you experience any difficulty in the later part of your irrigation season in getting water under your rights?

A. Well, generally, yes. We exhausted the flow pretty much toward the close of our irrigation season, which would be along between the 15th of July and the end of July.

Q. In number of days, what is the usual length of the irrigation season in that area?

A. From about the first of May until the 15th of July.

Q. What is the type of agriculture that is practiced there?

A. The only type I have seen practiced was the growing of wild hay, and some had planted a little timothy, but the large part was native hay.

MR. WARREN: Mr. Burke, would you mind fixing the time?

MR. BURKE: This is 1888 to 1898, the time when he was engaged in that area in farming operations.

MR. WARREN: Are you speaking now of North Park?

MR. BURKE: Yes.

THE WITNESS: Yes, North Park.

Transcript Pages 20969-20970

Cross Examination by Mr. Wehrli:

Q. When the Pathfinder was constructed, under permits and applications dated from 1904, of course, you were familiar with the entire project from its different angles, and, no doubt, you had a great many conferences with representatives of the Government and others in connection

with the construction of the Pathfinder and the use to be made of it?

A. Yes, sir.

Q. There was no intention or expectation, was there, of the Pathfinder making any interference whatever with the development above?

A. We never thought of any interference, and, least of all with any vested rights that existed at that time.

Q. You were project manager from 1907 to 1924, were you?

A. Yes, from June, 1907, to the end of 1924.

Q. During all of that period of time, did you ever make any effort to interfere in any way with any development or use of water above Pathfinder?

A. No, I never did.

Q. Did it ever occur to you to call upon any irrigator above Pathfinder to close down his ditch to supply any water for Pathfinder?

A. Never.

Q. You never had any such intention?

A. I never had any such intention and I never did make any such request.

UNITED STATES WITNESS CONKLING

Transcript Pages 21380-21383

Direct Examination by Mr. Stoddard:

Q. Mr. Conkling, in your testimony this morning you stated that one of the factors necessary to consider in order to reach a conclusion upon the purpose of the study, that is, as to whether or not the physical characteristics of this stream system, in connection with the water flows and discharges of the river at various points, would lend themselves to an equitable solution of allocation of the waters

between the states—one of those factors that you referred to that you believed necessary to consider was whether or not the study of the discharge in the river during the irrigation season was such as to be favorable to the administration of the river under the strict doctrine of priority extended throughout the length of the stream where irrigation is practiced regardless of State lines. Now, basing your answer upon the studies that you have made, and the exhibits that have been introduced, and the stream-flow records and data that you have considered, will you state whether or not, in your opinion, the discharge during the irrigation season is such that it is favorable and feasible to administer the river on a strict priority basis throughout the entire length of the stream?

MR. GOOD: That is objected to as incompetent, irrelevant and immaterial; beyond the province of the witness; no sufficient foundation laid; not a proper matter for expert testimony, and encroaching on the province of the Court.

A. It would not be possible to administer the river throughout its length on the basis of priority.

Q. Upon what do you predicate that?

A. I predicate it upon the exhibits which have been introduced heretofore in this case, and the testimony, and my own personal knowledge of the river; the climatic conditions in the lower part of the river, particularly from Whalen down to Kearney, are such that fluctuations of flow are impossible to anticipate; the time of travel from the upper reaches of the river to the lower is such that there would be no proper basis, in view of the difficult situation in the lower river of closing canals above to furnish water to the lower river; if flow were kept in the river sufficient to give the lower canal a supply at the time when the flow was smallest, due to climatic fluctuations, there would be a large waste of water to points below. It is a very difficult situation we find in this river. This river is about the most difficult river that I have any knowledge of in the western United States to administer on any such basis as the priority basis. It is very difficult in any stream where

attempt is made to make the administration over a considerable length of the river.

Q. Mr. Conkling, basing your answer upon the studies you have made of the stream flows, and the fluctuations of those flows, and the Nebraska exhibits in the record, will you state whether or not, in your opinion, the administration of the flows as shown by the record in the State of Nebraska has been upon a strictly priority basis?

A. It has not been.

Q. Again basing your answer upon the available flows, and the studies that you have made thereof, and the studies of the recorded climatic conditions and variations of flows, state what effect, in your opinion, the administration based upon priorities throughout the stream, would have upon the future economic status of the areas upstream.

A. The present development of the river in all sections is based upon the unhampered taking of the waters, and thus, naturally, very little priority of administration has been attempted in Wyoming, according to their own exhibits, and, presumably, in Colorado, although they have done some; and, in Nebraska, the Nebraska exhibits show that there has been very little actual administration on the basis of priority. Now, these developments have grown up based on water supply and based on ability practically to take whatever water was available at their headgates. If, now, these existing developments should be deprived of water by the asserted prior right at the lower end of the river—I mean, primarily, the Kearney Canal and any others with prior rights—it would deprive the upper river users of water that they are now using and destroy economic values. I don't know as I can say any more on that particular matter.

Transcript Pages 21542-21544

Cross Examination by Mr. Wehrli:

Q. Assuming, Mr. Conkling, that you could anticipate it a little bit earlier, and assuming a recurrence of the 1934

run-off, which, at Pathfinder, was about 380,000 acre feet, there wouldn't be any way that you could shut off junior rights above Pathfinder and provide what is the average or mean supply of the last forty-five years, or 1,300,000 acre feet, at Pathfinder?

A. Oh, no, it would be a very small increment to the supply that you could get out of the junior rights. The increase in use above the Pathfinder since the Pathfinder right has been quite small.

Mr. GOOD: I move to strike the statement of the witness as to the increase above Pathfinder, for the reason that it is a voluntary statement and for the reason that the witness has already testified that he had no knowledge of the river since 1918 except for the two-day trip last month, and that was only from Whalen down to Kearney.

Q. Now, Mr. Conkling, I called your attention to Paragraph 10 on Page 3 of the letter, and that is no doubt what you had in mind when you and Mr. Meeker wrote that paragraph into this report about the inability of making up any shortages for the North Platte project by the shutting off of junior rights above Pathfinder, and that it simply could not be done.

A. No, I think we had something else in mind.

Q. Will you state what you had in mind in this part of the report?

A. When a reservoir starts to empty, a large reservoir of the capacity of the Pathfinder or any of these large reservoirs on the stream, and not being able to anticipate what the next year will be, or the next year, and so on, no administration would seem to be just, at least, that would stop junior priorities above merely because the Pathfinder Reservoir had space in it, because, since that is a hold-over reservoir, it may be in the next year or the succeeding two or three years the reservoir will fill up again, and all that you have accomplished by cutting off the junior priorities above is to cause some waste from the reservoir when it could not be used in a subsequent year.

Q. In other words, you have a damage to the juniors above without conferring any benefit on the seniors below?

A. Yes.

Q. So that if you shut off juniors above the Pathfinder for the purpose of creating a carry-over storage in Pathfinder in a particular year, and then in the succeeding year there is a large run-off and the carry-over is unnecessary, you have injured a junior above without necessity, so to speak?

A. That is the case, yes. That would be the case.

COLORADO WITNESS CHARLES L. PATTERSON

Transcript Pages 21943-21944

Direct Examination by Mr. Warren:

Q. Do you care to make any further comment concerning the matters shown on Exhibit No. 28, Mr. Patterson?

A. Yes, I would. When we had prepared the annual hydrograph of the North Platte River at Northgate, as shown on Colorado Exhibit 27, the question arose as to whether or not the decline in flow at that station during recent years was due to increased uses or depletions of the stream flow above. We went into that question from two standpoints, one a study of the uses of water above the Northgate station, and from that study concluded that there had been no increased depletion during the last nine years that would account for such a decline in the stream flow. That will be shown in subsequent testimony. Instead the North Platte River, we found from our second study, which is outlined in Colorado Exhibit 28, has been affected by the same cycle of deficiency precipitation that has caused declines in the flow of all of the adjoining and neighboring streams.

Of course, in all of these studies the objective is to try to forecast what another cycle of years in the future may show in the way of water production and stream flow run-off. While no one may forecast with certainty what the cli-

matic conditions will be during the next year or the next decade or during a coming period of 45 years, still we believe that it is reasonable to assume that in general the history of natural phenomenon will repeat itself. On such an assumption, whether we realize it or not, all our present long-time investments are being made. In our opinion there is as much assurance that natural and undeveloped stream flows during the next 45 years will be greater than they were during the past 45 years as there is to forecast the reverse condition. Certainly there is no recorded experience except the fact that previous drought cycles have been followed by more normal conditions. On the basis of that recorded experience it would seem reasonable to assume that the present deficiency will pass and be followed by more normal precipitation and stream flow conditions.

BY THE MASTER:

Q. Is there any record, Mr. Patterson, of the previous six-year cycle that would be comparable to the last six years, as to the remedy of it?

A. There is on the Rio Grande River as far as runoff is concerned. You will note on that river back in the six-year period 1899 to 1904 that it got down to an average just 70 per cent of the mean, whereas in the recent period of nine years there is no six-year period lower than 75 per cent.

Q. That condition does not seem to have been as widespread back in that period as recently.

A. No, as a matter of fact that drought in the late 80's and 90's was not as widespread as this, for you notice it did not affect the Poudre River. The flow of that stream was above normal. In the same period the Rio Grande was considered below normal.

When I say recorded experience I have in mind not only these stream flow records that are here portrayed over a 45-year period, but I also have in mind the somewhat longer precipitation records over the West, some of which are 75 years or more of duration; and while there are rec-

ords of extremely low precipitation in any given year that are quite common to all the western stations, and in some instances from the successions of two or three years of that aggregate, still I believe it is true that never before have we had one that has extended as many years as the nine years involved in this present cycle of drought.

Transcript Pages 22165-22167

Direct Examination by Mr. Warren:

A. The existing enterprises are all located at Cameron Pass. They are the Cameron Pass Ditch and the Michigan Ditch. Together these export water from the headwaters of the North Platte River or from this tributary, the Michigan River, in amounts ranging from 1000 acre feet in deficient seasons to about 8000 acre feet in the best water supply years. The average of such diversions for the period of the record, 1913 to 1939, having been about 4000 acre feet.

I want to state in that connection that our studies show that the ditches as originally constructed and as extended and enlarged during past years, I believe all of those some time ago—at any rate our studies in recent years when daily discharges have been available show that we might anticipate in a mean future a cycle of years, assuming the present diversion capacity to be maintained, not to be enlarged or extended, at approximately 6000 acre feet per season.

The extensions of these ditches as outlined on the two filing maps just discussed, Colorado Exhibit 45 and Colorado Exhibit 46, if those extensions are constructed, our guess or opinion is that they might together increase these exportations by about 6000 acre feet per year, making a total in the future after these extensions are built of about 12,000 acre feet annually of exported or transmountain diversion water.

Q. In your opinion are exportations above the figure of 10,000 acre feet possible?

A. I gave that figure as 12,000. The 10,000 figure that

you cited would be the average of past diversions plus the estimated future diversions of the proposed extensions. That figure might be better read 12,000, as the estimated future diversion after the proposed extensions are built, and under normal water supply conditions.

In our opinion, no exportations in excess of that amount are possible except if tunnels be constructed through the mountain ranges, or in lieu thereof extensive pump-lifts shall be involved.

I believe also to attain that figure, and certainly to justify any larger scale developments involving tunnels, that replacement storage reservoirs would be necessary.

Transcript Pages 22335-22339

Direct Examination by Mr. Warren:

Q. You mention willow-covered lowlands as having been reduced to an extent. Would those growths of willows transpire a considerable amount of water in their original condition?

A. Yes. And it should be recalled, under original conditions, that there were a large number of beaver in that country. The beaver dams across these little streams had the effect of creating ponds, and they in turn were water-consuming in character.

Q. Is there any historical documentary evidence as to the former condition of North Park?

A. Yes. I have read quite a number of such historical documents. In reading them it should be recalled that Jackson County or North Park had different names in various of those historical documents, among other names the word "New Park" is used by some, and the term "Bull Pen" is used by others. Then the area had an Indian name which translated is said to mean "Cow Lodge." In any event, regardless of the name, all of these historical documents are in agreement to the effect that the region was a wild game paradise, that buffalo, deer, elk, and antelope

grazed there in large numbers, and that beaver were so abundant along the numerous streams as to attract many of the early-day trappers.

Q. Are beaver there at the present time?

A. Yes, there are, but of course, in very relatively few numbers,

Periodically, it has been necessary to capture and remove some of those which survived in order to prevent them from building dams in the creeks and from breaking the banks in irrigating ditches. Only last winter the Colorado Fish and Game Commission, acting upon the demands of ditch owners and operators in Jackson County, undertook the capture of an estimated 1000 beaver in North Park.

Q. Would you state whether beaver are at present protected by the Colorado state game laws?

A. Yes. It is illegal to kill them or trap them, and the only way that these ranchmen could avoid the damage that they were causing to their ditches and their property was to appeal to the state agency, who sent their regular hunters and trappers up there and undertook to capture about a thousand of them. I am not confident how many they did actually catch last winter, but I do know that they undertook that project.

Q. In the original condition of the park, have you any information as to whether the beaver were plentiful?

A. Yes. These historical documents indicate that beaver dams and beaver ponds were everywhere, along practically all of the streams on the North Park.

Under those conditions what might be termed a natural irrigation system was created. Under that system the very flat areas and the free-water surface exposures were undoubtedly greater than the areas that we have recently ascertained and in our calculations have charged to natural consumption under present conditions.

Q. That is, you think the actual facts, had you been

able to show just precisely what lands were covered by beaver ponds and by growths of willows and such like water-consuming natural feeders, that the comparison would have resulted more favorably to Colorado than what you have used?

A. Yes. It would tend to diminish the quantity that we have said is chargeable to irrigation development in Colorado, and to have increased the item which we have listed under "Natural Consumption" or "Conveyance Losses." In other words, the total consumption under those original conditions, as created by beaver and non-valuable vegetation, probably consumed a larger quantity of water than we have now charged that natural agency with.

Q. State your conclusion as to what the effect would be, as compared to the previous condition, of a large number of beaver ponds.

A. The lands that formerly were covered by beaver ponds and by the native vegetation that are now converted into hay meadows and pastures probably consumed as much or perhaps more water than the same land today is consuming. In any event, the conversion of such lands to irrigated lands and the intentional irrigation of such lands has added very little even to stream depletions, has altered the outflows from Jackson County very little, if at all.

Q. Suppose, for purposes of illustration, that the irrigation we have in North Park should be abandoned and the region converted to a wild game refuge. What would the result be?

MR. GOOD: We object to this as speculative, conjectural, irrelevant, incompetent, and immaterial, of no value in this case.

MR. WEHRLI: Wyoming makes the same objection.

Q. You may answer, Mr. Patterson.

A. If irrigation in North Park should be abandoned and the region be converted to a wild game refuge—and I might state that such a proposal has been definitely under

consideration and has been investigated by our department not only in North Park but in South Park—it is doubtful in my mind if the recovery of water for use in downstream areas would be as great as our calculations and investigations have indicated. I make that prophecy or assertion because I firmly believe that natural irrigation would continue, at least, to involve some of the lands, and that its resulting consumption of water would be expanded by dams, barriers and other water-spreading devices, which would create equivalent water-consuming areas.

Q. You have made mention of these conditions prevailing in North Park during the early periods prior to its settlement and prior to the development of livestock and irrigation industries. Upon what are your opinions as to such early conditions based?

A. On information obtained from various historical documents.

Transcript Pages 22368-22370

Direct Examination by Mr. Warren:

Q. What comment would you make, Mr. Patterson, as to summer grazing in Jackson County?

A. The livestock of Jackson County are largely and usually grazed on the adjoining national forests for periods averaging about 105 days, beginning commonly in June and ending in September. There are intervals of roughly six weeks in the spring and fall between the summer grazing and winter feeding periods, and during those intervals the livestock must be cared for or pastured at or near home.

Q. Will you comment on the recent cycle of years as to what has happened concerning this summer pasture?

A. There is a very definite shortage of summer pasture in Jackson County. A part of that is due to the regulations and limitations imposed on the use of public lands in national forests, and part of that is due to the cycle of recent drought years when deficient precipitation on the mountains

and the valley floor of North Park have failed to produce the usual amount of grass in those areas.

Q. I will ask, Mr. Patterson, whether recent drought conditions over a cycle of years might or might not have something to do with the imposing of limitations upon grazing on the public lands.

A. Yes, I think, undoubtedly, that climatic situation has been what has prompted the people in charge of these national forests and public domain to impose increasing limitations on the number of cattle that may be pastured in those areas. That is intended to preserve those areas against over grazing and the resulting disastrous effects of erosion that follow such over grazing.

However, I also feel that even though normal conditions as to rainfall should recur, that the number of livestock permitted to graze in the national forests and on public domain will never again be as great as it was previously because of the general attitude of the federal government not to permit over grazing. They have found that before these limitations were imposed, and they were imposed before this recent cycle, that they were necessary in order to prevent over grazing even under normal conditions. So I would anticipate that if normal conditions return, the number of cattle in the lands will not be as great as they used to be.

Q. Is there anything suggested or indicated by this study as a measure to bring the industry into balance?

A. Yes. It is quite definitely shown, I believe, that there is need for additional grass on which to pasture the livestock during periods when winter feeding is not required. This need can be met in one of two ways: either by reducing the number of animal units to feed the summer pastures' capacity—a procedure which I believe, if attempted, would be undesirable, if applicable—or the second way, by increasing the capacity of the summer pasture. To do that, additional irrigational development is necessary, but that is a desirable procedure in the case of both

Jackson County and the State of Colorado. That is to say, to try to hold on to what you develop rather than to be forced to go back to a lower scale than we now have.

Transcript Pages 22388-22389

Direct Examination by Mr. Warren:

Q. Would you read the whole paragraph (referring to Colo. Ex. 60)?

A. The second paragraph reads as follows: "For about fifteen years the U. S. Reclamation Service has taken the position that there was insufficient water for additional irrigation development above the Pathfinder Reservoir. The upper North Platte basin has experienced the same treatment accorded the upper Rio Grande basin above the Elephant Butte Reservoir in New Mexico. Irrigation development has been held up, rights-of-way denied and some projects temporarily abandoned."

Q. I think you might read right on through, if you will, to the bottom of the page, at least.

A. The third paragraph of page 1 of the letter reads as follows: "Reference is made to a recent cooperative investigation and report between the State of Wyoming and the U. S. Reclamation Service concerning the future utilization of North Platte water. This report is based upon a careful engineering investigation covering the entire North Platte basin to the eastern limit of irrigation at Kearney, Nebraska, and involving nine months' time and expenditure of over $10,000."

The fourth paragraph reads: "The conclusion of the Board of Review was substantially, there is sufficient water for all irrigable lands of the basin and now there is no need for restrictions on irrigation development above Pathfinder Reservoir.

"From information now on hand 137,000 acres are irrigated in North Park, Colorado, and the irrigable lands which ultimately will require water supply approximate

100,000 acres. North Park projects in Colorado have experienced delays and troubles, and the attached correspondence indicates the means used by the U. S. Reclamation Service to protect their Pathfinder water supply for use on the 250,000 acre North Platte project in eastern Wyoming and western Nebraska."

Transcript Page 22395

Direct Examination by Mr. Warren:

Q. How does that figure differ from Mr. Meeker's?

A. As I stated, we can not find any such an amount of land up there. The unirrigated lands that we have called arable lands and are pictured on the map Colorado Exhibit 58 aggregate a total of 34,400 acres.

Q. And in making up your 34,000 some odd acres, you have surveyed and classified the tracts of land that might now be under irrigation and probably would be, except for delays incident to securing rights-of-way agreement, is that the way of it?

A. Yes. This Walden Ditch and Reservoir project being one of them, and this area being, according to our surveys, 15,740 acres, the estimate contained in the Meeker report as to that project showing 15,000 acres even, that figure appearing on page 3.

Q. Well, in considering the possibilities of North Park, Jackson County, development, Mr. Patterson, have you or have you not confined yourself to gravity systems, to the exclusion of any ideas of pumping water for irrigation supplies?

A. Yes, we have excluded the possibilities of pumping on the ground that the cost is not justified by the resulting benefits.

Q. Under present economic conditions?

A. Yes.

Transcript Pages 22429-22430

Direct Examination by Mr. Warren:

Q. In connection with Jackson County project lands, those were susceptible of irrigation from the Michigan River?

A. Yes.

Q. And the original sponsors contemplated some reservoir development.

A. Yes; they contemplated the construction of the Sabin Reservoir, in the upper headwaters of the Michigan River, or the south branch of the Michigan River, and also the North Michigan Reservoir site on the North Michigan River.

Transcript Pages 22430-22431

Direct Examination by Mr. Warren:

Q. Will you state whether there is a project known as the Johnny Moore Reservoir site?

A. Yes, surveys have been made of a site known as the Johnny Moore Reservoir site. It is a channel reservoir site on the Michigan River, in the general vicinity of the Haworth School. This site can be developed to a satisfactory size—that is, to a capacity of approximately 32,000 acre feet.

Transcript Pages 22433-22434

Direct Examination by Mr. Warren:

Q. Mr. Patterson, will you examine the item marked for identification Colorado Exhibit No. 67, and state what it is?

A. Colorado Exhibit No. 67, consisting of two sheets, is a photostatic reproduction of the filing map and statement of claim bearing the number 5896 in the office of the

State Engineer of Colorado. This was a preliminary filing accepted in the office of the State Engineer of Colorado on June 1, 1909. It relates to a reservoir site known as the Rand Reservoir, located on Willow Creek just east of the town of Rand.

Q. Do you have the number of this filing?

A. The number is 5896 in the State Engineer's office.

Q. Is that shown in the lower right-hand corner of the first sheet?

A. Both of the sheets bear that number.

Q. And it bears the certificate on the face of it that it is being presented for filing?

A. Yes.

Q. Are you familiar with this reservoir site?

A. Yes.

Q. What would you say as to the character of the site?

A. The Rand site is a good reservoir site as they are classified in mountain regions; it is one that might be developed, if water supply is justified, with a capacity of 81,000 acre feet.

Transcript Pages 22438-22439

Yes, there are several others. As shown on the map, Colorado Exhibit 58, there is a reservoir site on Grizzly Creek—Big Grizzly Creek—in the general vicinity of Spicer School and the Spicer Post Office. Surveys of that site indicate a probable capacity for a reservoir of 13,800 acre feet. Then just to the west there has been a survey of a reservoir site on Colorado Creek, with a capacity of 3200 acre feet; and to the north of those two, in the vicinity of the Pole Mountain Lakes, on Grizzly Creek, there is a reservoir site known as Coalmont Reservoir site, with a capacity of 23,500 acre feet, that being on the south fork of Little Grizzly.

Transcript Pages 22444-22446

Direct Examination by Mr. Warren:

Q. Mention has been made of some attempts by the Department of the Interior authorities to protect its Pathfinder project water supply through defeating proposed irrigation developments in Jackson County. Are you familiar with the methods used?

A. Yes, I believe I am. There were several of them. One was to refuse to grant Colorado's withdrawal application under the Carey Act. The second method was to refuse to grant rights of way for ditch and reservoir construction. And the third was the one mentioned in connection with the Walden Ditch and Reservoir Project, where the right of way agreement was so restricted as to prevent the financing of the project.

Q. Was there any other method used by the Department of the Interior?

A. There was another method that was employed: Under the desert land Act, entries upon the public domain of Jackson County were denied where the ditches proposed for construction were yet to be built, that is to say, after about 1910, or where the water rights of constructed ditches to be used for the irrigation of the entered land, or portions thereof, were dated after the priority date claimed on behalf of the Pathfinder Reservoir.

Q. What is your understanding as to these several rulings and actions of federal agencies subsequent to the time of the original rulings and actions?

A. It is my understanding that they were subsequently revised or withdrawn.

Q. In the meantime, however, what had happened?

A. In the meantime there was some damage, that is to say, there were certain specific projects that were defeated by the delays which they encountered. Another point that may have a bearing is the fact that Jackson County got

the reputation of being a locality where it was useless to make applications for rights of way or to take up land under the Desert Land Act, for the reason that the government had gone into the irrigation business in the downstream areas and would permit no competition.

Q. Would it be possible for you to estimate accurately the amount of this damage that was suffered by Jackson County and the State of Colorado?

A. No, I do not believe I could make an accurate estimate of the damage.

Q. Do you think anyone else would be able to do it?

A. Well, not accurately, I would say. I think anyone could make some kind of an estimate. I mean to get it down to an accurate determination of the injury, I doubt if that could be done by anyone.

Transcript Pages 22861-22862

Cross-Examination by Mr. Wehrli:

Q. Well, Mr. Patterson, if you were asked to give a percentage of the amount diverted in North Park as a whole over those three months, would you accept those percentages as being about right?

A. Yes, I think they are indicative of about the situation that prevails up there.

Q. And they indicate about what the demand would be, not in terms of supply, but in terms of percentages over the irrigation period?

A. No, they more nearly indicate actual performance or practice. As I have repeatedly said, there is a shortage of water more or less chronic in July, and as far as demand is concerned, North Park could use more water in July with benefit.

Q. That is a demand under present conditions developed that can not be supplied?

A. No, there is only one possibility of meeting it, and that is to regulate the stream flows by reservoirs.

COLORADO WITNESS BOSTON

Transcript Page 23136

Cross-Examination by Mr. Wehrli:

Q. Did you ever have any request or direction from anybody to make any regulation in North Park for the benefit of any appropriator in Wyoming?

A. No, sir.

Q. Did you ever have any request or direction from anybody to make any regulation in North Park for the benefit of any appropriator in the State of Nebraska?

A. No.

Q. Did any such request ever come to you, either directly from the State of Wyoming or the State of Nebraska or an appropriator in either of those states?

A. No, sir.

Q. Or was any such request ever transmitted to you from your superior, the State Engineer?

A. No, sir.

COLORADO WITNESS WHITE

Transcript Page 23172

Direct Examination by Mr. Warren:

Q. What would you say about the general practices in the Park now as to whether the ranchmen are over-pasturing their meadows or not?

A. I think that everybody in the Park at the present time is forcing all their pasture, to try and take care of as much of their hay as they can.

Q. And the result of that is what?

A. Naturally the curtailment of their hay crops.

Q. They keep their cattle on too late in the spring?

A. In the spring.

Q. Well, how could that be eliminated?

A. Well, by developing a sufficient amount of extra pasture to take care of it.

Q. By what means?

A. Well, I think the simplest way is just to go ahead and irrigate a lot of additional land.

Q. Is there any rule or regulation in the Department against the irrigation of grazing lands?

A. You are referring now to Taylor Act Grazing lands?

Q. Yes.

A. No, they encourage the irrigation of Taylor Act land. In fact, two years ago, the Taylor Act, through their CCC Camp at Walden, located four miles north of Walden, did considerable irrigating on an old irrigation project there, and were planning on irrigating a big tract of Taylor Act land lying north and east of Walden.

COLORADO WITNESS MAIN

Transcript Page 23387

Direct Examination by Mr. Warren:

Q. Do you know how many ranches there were in Jackson County in 1938?

A. There were 244.

Q. What was their average size?

A. Something over 1400 acres, on an average size.

Q. What was the average value of these ranches if you know?

A. They had an average value of approximately $12,000.

Q. How do you fix that value?

A. I took it from the agricultural report of the Colorado Planning Commission.

COLORADO WITNESS CHARLES L. PATTERSON

Transcript Pages 24338-24340

Direct Examination by Mr. Warren:

A. Colorado Exhibit 117 is a combination tabulation and graph showing the results of our investigations as to the extent of the irrigated lands in the North Platte River basin in the states of Colorado, Wyoming, and Nebraska.

Q. How are the results of this tabulation indicated?

A. The results of our studies are indicated by figures appearing in a line designated 1939, showing a total of 1,026,050 acres irrigated in the entire stream basin, and showing segregations of that total as between the three states, namely, 136,155 acres in Colorado; 506,540 acres in Wyoming; and 383,355 acres in Nebraska.

Q. That appears at the top line of the tabulation on the right of the exhibit?

A. Yes.

Q. Will you explain the connection between the graph shown at the upper or left side of the exhibit and the tabulation on the right hand side?

A. The same values for each of the states and for the entire stream basin are also indicated by a character resembling a six pointed star located in each case at the end of the lines which refer to each of the three states and to the entire basin. These characters or six pointed stars are located along the line opposite the year 1939, and they are also located with regard to the scale appearing on the bottom or left hand side of the exhibit, in which the irrigated areas are indicated in thousands of acres.

THE MASTER: Does the Nebraska area include the Platte River basin, Mr. Patterson?

THE WITNESS: No, this is strictly the North Platte. There will be an exhibit later to show the main Platte River below North Platte, Nebraska, but all this information relates wholly and solely to the North Platte River basin.

Q. Mr. Patterson, you have mentioned the year 1939 appearing at the top line of figures. Is it true that the relationship there shown between the tabulation for the year 1939 is also shown with the graph and by the tabulation for each of the years from 1880 to 1939?

A. Yes. However, I will say this, that two different methods of study were necessarily applied to the two different periods; that is to say, the present indicated by the values appearing in 1939 were determined by us directly, whereas the values in preceding years, from which those curves were determined, were arrived at in other ways, which will be more fully explained later.

Q. Would you describe generally the methods which were employed to estimate the extent of the irrigated areas in each of the three states?

A. Generally speaking, the method was based upon aerial photographs or aerial surveys, combined with field observations, or what might be termed a cruise of the various tributary valleys and main river sections in which the irrigated lands are located.

Q. Have you heretofore described in detail the methods pursued in determining the extent of the lands irrigated in Jackson County?

A. Yes, we went into that more or less fully in the hearing of May, 1940.

Q. And will you give reference to the particular exhibit heretofore introduced showing the irrigated area in Jackson County?

A. A summary of that investigation of the irrigated

areas in Jackson County appears as Colorado Exhibit 40, and that shows a value of 131,810 acres.

Q. As appears in Colorado Exhibit 117 now before us, what is the total irrigated area of the North Platte River basin in Colorado as of the year 1939?

A. That total is 136,155 acres. I might explain these additional 4,345 acres of irrigated land in Colorado as that part located in the Laramie River basin in Larimer County, Colorado.

Transcript Pages 24877-24878

By the Master:

Q. Your studies testified to at this session have been upon the basis of total water delivered and available in each state, irrespective of the time when such water is available. Is that upon the theory that the proper allocation of water among the three states in this suit should be upon the basis of total water at any time available at each state, thereby in effect charging each state with the obligation of conserving of storage or other waters in that state, so as to afford the greatest possible utilization, or is this testimony directed to any particular theory, or is it just general information?

A. Well, I have tried to avoid any position of being an advocate. I have felt that the figures speak for themselves, and if they are carefully prepared and are before us that then some method of allocation that will avoid overburdening any one state and will protect all the states against the effects of development in the other states could be worked out. However, that is not an engineering matter.

Transcript Pages 24884-24885

By the Master:

Q. Then your approach to the problem is one of taking into consideration the total requirements in each state, and the total water available in each state, which, of course,

entirely eliminates the principle of priority of appropriation?

A. Yes.

Q. You don't recognize that as being a principle that can be taken into account in this case?

A. No. I feel sincerely on that question that any method of defining the relative rights of the states or of imposing on the river a system of interstate administration based upon individual rights would have but one effect, and that would be to force more water down into Nebraska, and to increase rather than to diminish the unconsumed outflows.

And I think it is a very unfortunate concept from the standpoint of peace between these states, because I am sure that if any such a plan were imposed on the river, the enforcement would result in eternal litigation, if not in violence at times. I doubt if it could be said to be capable of enforcement. It sounds nice, and it is perfectly all right among neighbors to agree to that rule of priority, but we find in our own state that while that rule is the foundation of most of our water right values and our land values in this state, nevertheless, as a matter of self-interest and getting the best results we can from the water that is available to us—now, I mean by that both physical and legal—we must do things that constitute violations of that priority rule, and we do them. There are numerous instances of where we have to do them. We have to store the water upstream as far as possible when we can, and take care of the essential needs of those fellows on the same creek farther downstream when that need arises. We let the new development as long as it is reasonable go ahead and store the water. We find that is the only way we can improve our situation.

Now, I would like to make this suggestion, as long as you have asked the question, that I believe the opportunities in the future—and I mean by that thinking perhaps fifty years or more in the future—that remain along this

river are inherently to accrue to the benefit of the State of Nebraska. Now, in my estimation it isn't anything that we should be concerned with how Nebraska might organize her local interests so as to get that benefit. I don't believe that Nebraska has a right to permit large quantities of water to go to waste, and at the same time ask for restrictions upon present users upstream. I think we can concentrate our thinking in this case on the allocations of the remaining opportunities, rather than upon a shifting of vested rights from one area to another.

WYOMING WITNESS NELSON

Transcript Pages 27627-27629

Direct Examination by Mr. Wehrli:

Q. Mr. Nelson, in the experience that you have had in your practice and the studies that you have made, it is not a common situation, is it, where there is a supply adequate on any stream system where irrigation is practiced—an adequate or one hundred per cent supply during all times?

A. There seldom has been. There are conditions which arise because of the incompetency of man to regulate all his works to conform to these climatic conditions which make it impossible at times to deliver just the required amount each month, and such conditions must be faced; that is to say, there can be no guaranty of one hundred per cent supply under all conditions all of the time. Even with a full water supply available for any small portion of the river, that would hardly be true, unless, of course, one hundred per cent control by storage were possible and were made available.

Q. You mean in part, do you not, that conditions from day to day, or week to week, or month to month, will not be forecasted sufficiently accurately in advance to permit the distribution of the supply, even if it were available?

A. That is correct.

Q. Now, is it not a fact, Mr. Nelson, that upon most

streams where irrigation is practiced, the amount of developed land makes it impossible in years of low supply for there to be a complete supply at all times for the developed areas?

A. Yes. That is, if during years of ample run-off, when water was not conserved for use during years of low run-off during heavy drouth periods, the irrigation which had developed were then suddenly deprived of a supply, even in small part, it would be destroyed in behalf of an attempt to give a fuller supply to other rights, during just brief periods of drouth.

Q. Well, is it true that in the ordinary case, or upon the ordinary stream, the development is restricted to only that amount of land which can be supplied in the lowest year or the lowest dry cycle?

A. That would be most uneconomical.

Q. In your opinion, is it economical to restrict development on the upper reaches of a stream to the point where a complete one hundred per cent supply can always be supplied for the lower development on the same stream?

A. No; and it can't be done anyway.

UNITED STATES WITNESS DIBBLE

Transcript Pages 29106-29107

By the Master:

Q. The assumptions are applicable to average conditions, I take it, or intended to be applicable to average conditions?

A. We have taken the average conditions for a period of years during a drouth period as that to which to apply the study. The rules we set up in making the study are in general applicable to all years. I do not assume that the average diversions of water will occur in every year. Climatic conditions materially affect the use of irrigation water from year to year. 1941 is an illustration of that. The deliveries to the land of irrigation water have been rela-

tively small in 1941—on the North Platte project I believe .9 of an acre foot per acre—and yet the project was in position to accumulate some storage. They did not use all the storage water from the North Platte reservoir during 1941. Now, in a study of this kind, that sort of variations must be taken into account, and I think we have, as near as physically possible in this kind of a study, allowed for natural conditions by tying this up to historical points, as far as we could. The thought that we have in mind in general operation is that if the project does not use the full allotment of water that is made in one year, they would be able to establish credit as far as stored water is concerned, or any water is concerned, that can be drawn on at some later time, if the water is available and hasn't gone down the river because of the failure of the use of it. That plan is in operation on many rivers, and works very satisfactorily. Where the storage is great it is an important factor in the ratio. There are a great many little complications that creep into a study of this kind that must be considered and, of course, they must be considered on a basis such that the operating man responsible for the administration of the river can determine the various points and be looking ahead instead of having the advantage of the hindsight that we have in making a study of this kind; it is very much easier to say what could be done after it is done than it is anticipating a situation.

COLORADO WITNESS CHARLES L. PATTERSON

Transcript Pages 29434-29435

By the Master:

Q. The objection to it, particularly in shortage times, is that it proposes such a severe hardship on juniors for the advantage of seniors. Now, if the priority rule was strictly applied in all three states as intrastate system operation, then wouldn't the aggregate of the detriments to the juniors equal the detriment to the Interstate—except for one factor, perhaps, and that is the loss of water through more distant and lengthy transportation, to make an interstate system inoperative.

A. Well, I think in the interstate phase of it we have a situation that simply can not be avoided, that necessarily one state must be upstream from the other. So when you go to considering the aggregate of the individual priorities which one state may have recognized in its citizens as a basis for administering the rights of other individuals in another state that may have been defined under a different procedure, it seems to me that the first step would have to be to extend this hearing indefinitely into the future and bring in the individual enterprises and let each one adjudicate his claims as opposed to the others in the same proceeding; but even then, the inevitable rule works, that to recognize today's shortages under a direct delivery system in downstream area would mean, under drouth conditions or shortage of water supply, taking water away from that upstream user; and you can not get it to turn around and run back up hill if you made a mistake; if, in the meantime, it runs it is gone from him forever, and maybe or maybe not the downstream user will get it when it gets there. So that you do have a greatly magnified situation, by reason of the extreme length of this river, plus the fact that all three states have defined the rights of their individual citizens under different procedures.